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ABSTRACT

These proceedings consist of the following presentations and discussion papers: "Extension Research Needs in Evalaution" (Michael Patton); "Needed Research in Program Development" (Roger Lawrence); "The Cooperative Extension Service: A National Assessment" (Paul Warner); "National Study of Extension's Research Base: Implications for Extension Education' (H. Peter Marshall and Robert W. Miller); "Louisiana Cooperative Extension Service House Program Impact Study" (Claudette H. Reichel and Joe W. Kotrlik); "Impact of a Statewide Nutrition Education Program among Mainstream and Low-Income Audiences" (Satish Verma, Donna E. Montgomery, and Elsie J. Cyrus); "Minnesota Youth Poll: Aspirations, Future Plans, and Expectations of Young People in Minnesota" (Joyce Walker); "Perceptions of 4-H Alumni from Four Ohio Counties Concerning the Impact of 4-H on their Career Development" (Jan Matulis); "Problems that Hamper Success of County 4-H Programs" (Layle D. Lawrence and Edward K. Tumusiime); "Is a Volunteer Teacher System Effective?" (Dixie Porter Johnson); "Building an Organizational Norm to Balance Professional/Personal Lives among Pennsylvania Extension Staff" (Joan S. Thomson, Robert B. Lewis, Tena L. St. Pierre, and Nancy E. Kiernan); and "A Causal Model of Personal Factors Influencing the Decision to Volunteer and Level of Involvement among Adult 4-H Leaders" (Fred R. Rohs). Critiques of the discussion papers and references for all papers are also included. (MN)

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PROCEEDINGS FOR THE SYMPOSIUM ON RESEARCH NEEDS FOR EXTENSION EDUCATION

THE OHIO STATE UNIVERSITY
COOPERATIVE EXTENSION SERVICE
AND
AGRICULTURAL EDUCATION DEPARTMENT

U.S. DEPARTMENT OF EDUCATION
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DR. KEITH L. SMITH, COORDINATOR
UNIVERSITY HILTON INN
MAY 21 - 23, 1985

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AGENDA

AGENDA
SYMPOSIUM ON EXTENSION RESEARCH NEEDS
UNIVERSITY HILTON INN, COLUMBUS, OHIO
BUCCANEER AND RUM RUNNER ROOM
MAY 21 - 23, 1985

(All scheduled functions will be held at the Hilton Inn)

Tuesday, May 21

CHAIRPERSON: Larry Miller

11:00 Registration

12:00 Lunch

1:00 Welcome
Director J. Michael Sprott
Ohio Cooperative Extension Service

1:15 Paper Session
1. **H. Peter Marshall & Robert W. Miller**
"National Study of Extension's Research Base: Implications for Extension Education"
2. **Claudette H. Reichel & Joe W. Kotrlik**
"Louisiana Cooperative Extension Service House Program Impact Study"
3. **Satish Verma, Donna E. Montgomery & Elsie J. Cyrus**
"Impact of a Statewide Nutrition Education Program Among Mainstream and Low-Income Audiences"

3:00 Break **(LOBBY)**

3:30 Paper Session
1. **Joyce Walker**
"Minnesota Youth Poll: Aspirations, Future Plans and Expectations of Young People in Minnesota"
2. **Jan Matulis**
"Perceptions of 4-H Alumni From Four Ohio Counties Concerning the Impact of 4-H on Their Career Development"
3. **Layle D. Lawrence & Edward K. Tumusiime**
"Problems that Hamper Success of County 4-H Programs"

5:15 Adjourn

EVENING

7:00 Mini Inservice - "Regression Analysis"
Resource: **Dr. J. Robert Warmbrod**, Chairman, Department of Agricultural Education

Wednesday, May 22

A.M. CHAIRPERSON: Joe Pittman

8:30 "Extension Research Needs in Administration and Supervision"
Resource: **Dr. Charles Koval**, Director, Wisconsin Extension

REACTORS: Luane Lange, University of Connecticut
Milton Boyce, USDA, Washington D.C.

10:00 Break **(LOBBY)**

10:30 "Extension Research Needs in Evaluation"
Resource: **Dr. Michael Patton**, Evaluation Specialist, University of Minnesota

REACTORS: Donald Blackburn, University of Guelph, Canada
Joy Cantrell, Pennsylvania State University

12:00 Lunch

P.M. CHAIRPERSON: KEITH L. SMITH

1:30 Paper Session
1. **Dixie Porter Johnson**
"Is a Volunteer Teacher System Effective?"
2. **Joan S. Thomson, Robert B. Lewis, Tena L. St. Pierre & Nancy E. Kiernan**
"Building an Organizational Norm to Balance Professional/Personal Lives Among Pennsylvania Extension Staff"
3. **Fred R. Rohs**
"A Causal Model of Personal Factors Influencing the Decision to Volunteer and Level of Involvement Among Adult 4-H Leaders"

3:15 Break **(LOBBY)**

3:30 Graduate Forum
Coodinator: **Emma Van Tilburg**

Thursday, May 23

CHAIRPERSON: EMMA VAN TILBURG

8:00 "Needed Research in Program Development"
Resource: **Dr. Roger Lawrence**, Professor and Section Leader, Adult and Extension Education, Iowa State University

REACTORS: Ann Hancook, Purdue University
Constance McKenna, USDA, Washington D.C.

9:30 Break (LOBBY)

10:00 "The Cooperative Extension Service: A National Assessment"
Resource: Dr. Paul Warner, Assistant Director for Development and Training, University of Kentucky

REACTORS: Julia Gamon, Iowa State University
Stephen Scheneman, Virginia Tech

11:30 Wrap Up; Evaluation
Coordinator: Keith L. Smith

12:00 Adjournment

OSU

Cooperative Extension Service
The Ohio State University

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TO: Extension Educators

The contents which are found in this publication are the result of some diligent efforts by respected Extension educators across the country who have by research and review identified major concerns of research or have conducted research regarding topics pertinent to Extension.

Four papers are found in this publication which have explored the areas of:

1. Extension Research Needs in Administration and Supervision

2. Extension Research Needs in Evaluation

3. Extension Research Needs in Program Development

4. Extension's Image, Research Needs as a result.

We also have included nine refereed papers from educators throughout the country concerning such topics as: Extension's impact, 4-H and youth, and program development. These papers were presented on May 21, 22, & 23, 1985 at the University Hilton Inn, next to the campus of The Ohio State University. Extension educators and Agricultural Education faculty from fifteen states as well as Canada joined in this Symposium with these four presentations, plus the refereed papers session in lively dialogue and discussion.

The Ohio State Cooperative Extension Service is committed to examine research needs as identified by these well known presenters as well as research needs stimulated by the refereed paper sessions. We are excited about the information contained in these proceedings and invite other Cooperative Extension Services/Agricultural Education Departments throughout the country to involve themselves in similar scholarly activities.

Sincerely,

Dr. Keith L. Smith, Chairman
Leader, Personnel Development, OCES
Assistant Professor, Ag. Ed.

KLS:jtp

Other Members of the Symposium Committee

Dr. Larry Miller - Professor, Agricultural Education, The Ohio State University
Mrs. Naurine McCormick, Assistant Director, Home Economics, OCES
Dr. Joe Pittman - East District Supervisor, OCES
Ms. Emma Van Tilburg - Graduate Student, Agricultural Education, The Ohio State Unviversity

EXTENSION RESEARCH NEEDS
IN ADMINISTRATION AND SUPERVISION

DR. CHARLES KOVAL
DIRECTOR
WISCONSIN COOPERATIVE EXTENSION SERVICE

(THIS PAPER WAS NOT SUPPLIED BY THE AUTHOR)

EXTENSION RESEARCH NEEDS IN EVALUATION

DR. MICHAEL PATTON
EVALUATION SPECIALIST
UNIVERSITY OF MINNESOTA

EXTENSION RESEARCH NEEDS IN EVALUATION

By Michael Quinn Patton
University of Minnesota

Presented at the Symposium on
Extension Research Needs

Ohio State University
May 22, 1985

The practice of evaluation involves the systematic collection of information about the activities, characteristics, and outcomes of programs, personnel, and products for use by specific people to reduce uncertainties, improve effectiveness, and make decisions with regard to what those programs, personnel, or products are doing and affecting. This definition of evaluation emphasizes (1) a systematic collection of information about (2) a broad range of topics (3) for use by specific people (4) for a variety of purposes.

This definition of evaluation is purposefully broad and includes, quite explicitly, the notion that evaluation can be used in a variety of ways. Definitions of evaluation vary, with some being quite narrow. In considering extension research needs in evaluation, it is helpful to begin with how evaluation is defined because variations in definitions of evaluation will affect the identification of research needs and make the task of conducting such research on utilization quite complex and varied.

Variations in Evaluation Definitions

William J. Gephart's comprehensive effort at defining evaluation illustrates both the problem and one kind of solution. He begins with the assumption that no short, succinct definition will suffice. Single-sentence definitions usually contain a host of terms that need further definition to clarify the original definition. He proceeds to

define evaluation in six different ways, different in that each represents a distinct approach to the definitional task. (1) His classificatory definition describes evaluation as a "problem-solving strategy" employed for establishing the relative or absolute worth of various choices. (2) His comparative definition likens evaluation to research, development, management, and other problem-solving strategies, pointing out similarities and differences with each. (3) His operational definition tells how an evaluation is conducted, from identification of the impending decision through data collection and analysis to information use. (4) His componential definition explains that evaluations include a problem, a situation involving choices, data on the worth of options, a context, a set of values, a time frame, and so on. (5) His ostensive definition gives examples of evaluations (e.g., deciding which dishwasher to buy). (6) His synonym definition includes such words as judgment and appraisal. He concludes that these six definitions, "taken together," form his concept of evaluation. He also notes that one of the difficulties encountered in sharing definitions is that, while there are at least six different ways of approaching the definitional task, "most of us fall into the habit of using only one of them" (Gephart, 1981:250-255).

Gephart's effort shows that there are various ways of approaching the definitional task. Further complicating the problem is the fact that within any one or more approaches, the content of the definition can vary. A review of a few of the variations in the content of definitions of evaluation reveals important differences in what various evaluators emphasize in their work.

(1) The classic approach of Ralph Tyler (1949) was to emphasize goals and objectives, so for him (and for the thousands of educators and

researchers schooled in his approach), evaluation is the process of determining the extent to which the goals and objectives of a program are being attained.

(2) Many social scientists emphasize scientific rigor in their evaluation models, and that emphasis is reflected in their definition of the field. For these social scientists, evaluation involves primarily the application of rigorous social science methods to the study of programs (e.g., Bernstein and Freeman, 1975; Rossi, Freeman, and Wright, 1979). These evaluators emphasize the importance of experimental designs and quantitative measures.

(3) Another common emphasis in evaluation definitions is on the comparative nature of the process: Evaluation is the process of comparing the relative costs and benefits of two or more programs. The principles and definitions that undergird evaluation models emphasizing the comparative nature of the process have emerged in part as a reaction to the narrowness of evaluation when defined as measuring relative attainment of a single program's goals (see Alkin and Ellett, 1984).

(4) Still another emphasis comes from evaluators who highlight the valuation part of evaluation. From this perspective evaluation is the process of judging a program's value. This final judgment, this ultimate determination of relative merit or worth, is the sine qua non of evaluation (see Worthen and Sanders, 1973: 22-26, 120-122; Guba and Lincoln, 1981: 35-36).

(5) Some evaluation practitioners focus on the generation of data for decision making and problem solving. This perspective goes beyond making judgments or assigning relative values. The emphasis is on choices, decisions, and problem resolution. It is quite possible to decide that one

thing is better than another (e.g., program X versus program Y) without taking any concrete decision with regard to program X or program Y. When evaluation is defined as a problem-solving process (Gephart, 1981) or as a process that provides information for decision making (Thompson, 1975), some action process that goes beyond valuation is given primary emphasis in the definition.

(6) Finally, for the purposes of this discussion, there are those definitions that emphasize providing information to specific people. The broad definition I use most often takes this approach.

> The practice of evaluation involves the systematic collection of information about the activities, characteristics, and outcomes of programs, personnel, and products for use by specific people to reduce uncertainties, improve effectiveness, and make decisions with regard to what those programs, personnel or products are doing and affecting. This definition of evaluation emphasizes (1) the systematic collection of information about (2) a broad range of topics (3) for use by specific people (4) for a variety of purposes.

This definition is the basis for a "user-focused" approach to evaluation (Patton, 1981: 83-89), which places emphasis on the information needs and interests of specific people, such needs including, but not limited to, information relevant to making decisions, judgments, comparisons, or goal attainment assessments.

Now then, we have six different types of evaluation definitions (classificatory, comparative, operational, componential, ostensive, and synonym) and six different emphases in various definitions (goals, methods, comparisons, value, decisions, and information users). Nor do these cover all the possibilities. For example, in the study of how evaluations are used that formed the basis for Utilization-Focused Evaluation (Patton, 1978), I began with a collection of 170 "evaluations" on file in the Office of Health Evaluation. Fewer than half of those 170 federal health studies

could be considered "evaluations" using any of the definitions just reviewed. This was because a large number of those studies were nonempirical think pieces (i.e., they included no systematic data collection or analysis) or they focused on general social indicators without reference to any specific program. Still, they were filed (defined!) as evaluations.

Let me now make several observations based on the preceding discussion. First, no single-sentence definition will suffice to fully capture the practice of evaluation. Second, different definitions serve different purposes, one especially important function being to serve as a foundation for a particular model of or perspective on evaluation. Third, there are fundamental disagreements within the field about the essence and boundaries of evaluation. Fourth, people who propound a particular definition often have some ego investment in their special perspective, whether because they developed it, were trained according to it, or are part of a group in which that definition is esteemed; any critique of a definition, in such cases, can be taken as a personal attack, a good many people finding it difficult to separate criticism of their ideas from criticism of them personally. Fifth, people on the outside looking in (and many within the field) are often confused and uncertain about just what evaluation is. Sixth, there is no reason to expect an early end to either the disagreements or the confusion. As Samuel Butler explained the problem in "Higgledy--Piggledy,"

> Definitions are a kind of scratching and generally leave a sore place more sore than it was before.

Extension and Evaluation

I have encountered all of these definitions of evaluation in

extension, although the "definitions" are often more implicit than explicit. One important area for research on evaluation within extension, then, is research on the nature and origins of variations in what evaluation means to extension people, extension funders, and extension clientele. Preconceptions about what evaluation is greatly affect how evaluation is received and what it can do.

In the 1983 special issue of the Journal of Extension on Evaluation, I contributed an article comparing extension principles with evaluation principles (Patton, 1983). In that article I argued that extension and evaluation both center on getting useful information to people. Extension provides information aimed a improving farm productivity, improving nutrition, and improving the quality of life in the home and on the farm. Evaluation provides information aimed at improving programs and improving the effectiveness of personnel. The information disseminated by both extension workers and evaluators is based on research. The challenges in both extension and evaluation involve getting the appropriate research findings to people who need reliable and valid information to make critical decisions -- and then getting those people to actually use the information in decision-making. Both extension and evaluation involve similar processes of making research knowledge understandable, packaging information for decision-making, educating information users, and encouraging people to act on the basis of knowledge.

I got quite a bit of reaction to this article. Perhaps the most common reaction from extension personnel was that evaluation and extension are different because evaluation is negative while extension is positive. Such reactions suggest that we need to better understand how evaluation is perceived in extension, and we need to better understand how to do

extension evaluations that are used in positive ways.

With that concern in mind, let me turn to the problem and challenge of evaluation utilization.

UTILIZATION

Since there is no universally accepted definition of evaluation, there can be no universally accepted definition of utilization. Any given definition of utilization will necessarily be dependent on and is derived from a prior definition of evaluation, whether that definition is implicit or explicit. As Eleanor Chelimsky has written: "The concept of usefulness...depends upon the perspective and values of the observer. This means that one person's usefulness may be another person's waste" (1983:155).

It is helpful to keep these definitional variations in mind as I review what professional evaluators have learned about utilization during the last twenty years -- and I believe we have learned a great deal about the utilization of evaluation. Discussions about and research on utilization have contributed to the emergence of "utility" as one of the four central themes in the standards for evaluation developed by the Joint Committee on Standards for Education Evaluation (1981). At the professional meetings of the Evaluation Research Society and the Evaluation Network concerns about increasing the utilization of evaluation have been pervasive. We know, therefore, a great deal more than we knew a few years ago. I want first to review some of what we know, and then turn to the future and identify areas about which we need to know more in extension. To organize this discussion about what we know I shall use the six honest serving men of Kipling:

I keep six honest serving men.
They taught me all I knew:
Their names are What and Why and When
And How and Where and Who.

What Is Use

Evaluations can have conceptual or action impacts. Conceptual impacts are those which affect thinking about a program. Such uses may lead to conceptualizing implementation or outcomes in new ways, understanding dynamics of the program more thoroughly, or shifts in program priorities. Action impacts are those which lead to observable changes in the actual operations of a program. These are most notable and dramatic when they involve changes in levels or types of funding, or changes in program delivery. Evaluations can also affect decisions. Evaluation may lead to a decision to continue or stop a program, or to do any of the large variety of things over which decisionmakers have control. A decision to do absolutely nothing new or different can be a major evaluation impact but will not lead to any observable action or change as a result of the evaluation.

The research on utilization is typically biased towards action impacts. The early litanies about the lack of utilization of evaluation were based on narrow definitions of utilization limited to immediate action. It is clear, though, from discussions with people who actually use evaluations (Patton, 1978) that reinforcing or challenging ways of thinking are important impacts for decisionmakers attempting to reduce their uncertainties about programs.

The relative importance, then, of evaluation utilization can only be judged perceptually by the value attached to utilization by those who use the evaluation. There can be no absolute standard which values action over thinking, changes in a program over keeping things the same, or decisions

to do something over decisions to wait. There simply can be no hierarchy of impacts because the hierarchy is necessarily situational and depends on the values and the needs of the people for whom the evaluation is conducted.

What Is Used

Early research on utilization focused on the outcomes of evaluation, i.e., the data, the recommendations, and the evaluation report. When the question was asked, "Was the evaluation useful?" the implicit assumption was that one was talking about the findings and recommendations of the evaluation.

As our understanding of the utilization process has increased, however, we have come to understand that evaluation processes can have significant impact quite apart from the outcomes of the evaluation. Indeed, evaluation processes can be used even if there are no outcomes of an evaluation, for example, if data collection falls apart and no report is ever written. Evaluation processes can be useful in helping program staff clarify what they are doing, establish priorities, focus resources and activities on specific outcomes, and identify areas of weakness even before data are collected. Evaluation processes are useful because they stimulate staff to think rigorously about their program in ways which might not happen without the forced stimulus of coming to grips with the demands of the evaluation.

In addition to the use of evaluation findings and evaluation processes, there is the use of the evaluator. Quite apart from facilitating evaluation processes and producing outcomes, the evaluator can be useful in program development and decision-making as a professional consultant who is sensitive to and insightful about the program. This

utilization of the evaluator can be viewed quite apart from and go well beyond the more narrow confines of data collection and goals clarification. It is not unusual for evaluators to be asked for their perceptions, their impressions, their managerial assistance, and their general advice above and beyond the narrow focus of data collection. Some evaluators are uncomfortable with this larger role and refuse to take it on, but many evaluators consciously or unknowingly become management consultants and important advisors to programs.

Who Uses Evaluation

There are multiple and varied interests around any evaluation in extension. Extension field staff, administrators, farmers, public officials, funders, and community leaders all have an interest in extension evaluations, but the degree and nature of their interests will vary. We have learned that these different constituencies use evaluations in different ways. Program staff are most likely to benefit from utilization of the evaluation process. Funders and the community people are most likely to use published data and written findings. Administrators are most likely to use the evaluator as a consultant. The kind of impact also varies. An evaluation is likely to be used to affect the thinking and conceptualization of people more distant from the day-to-day operations of the program, to affect actions taken by those actually involved in the day-to-day delivery of the program, and to affect the decisions taken by those with overall responsibility for the program, i.e., funders and administrators.

We have also learned that the extent to which these various constituencies are well served will vary from evaluation to evaluation. No single evaluation is likely to be able to serve all constituencies equally

well. Either implicitly or explicitly the evaluation design includes bias toward the information and process needs of some constituencies more than others. We have also learned that we should include among the list of possible constituencies who benefit from evaluation the evaluator himself or herself. An evaluation may serve the needs and interests of the evaluator more than those of any other constituency. Whether such use is acceptable, justifiable or important depends on where one is sitting and what values are brought to bear on the question of utilization. Nor am I talking here simply about lining the pockets of evaluators or providing academics with publishable papers.

I recently talked with a state administrator who had created an internal evaluation unit at the state level. During the first year of operations, the evaluation unit had conducted several evaluations all of which the state administrator judged to be useful "because they helped the evaluators learn how to conduct evaluations at the state level." None of these evaluations had yielded particularly useful information for the state administrator, nor were the subjects of the evaluation important for the state. The purpose of the evaluations conducted during the first year were entirely aimed at making the unit operational so that it could be useful in generating important data for decision-making in the future. This is a case of utilization of evaluation processes for the benefit of evaluators, at least in the short run.

When Is Evaluation Used

The qualifying phrase at the end of the last sentence points out the problem of determining a time horizon for the utilization of evaluations. The early literature on utilization of evaluations focused on immediate action impacts. Subsequent research found that evaluation utilization was

more likely to be incremental than immediate. This means that, in many cases, evaluation processes make a difference time and that evaluation outcomes (findings) are discussed and used over a period of time. This incremental nature of evaluation utilization flows in part from the incremental nature of most decision making. There are not a great many clear, specific and immediate decisions taken in public organizations. Rather, decision making tends to be a process of moving in a particular direction that is not always explicit and does not always come from decisive moments of action. There remains, I believe, a bias in the research literature on utilization in the direction of preferring immediate, concrete and short-term impacts to more diffuse and longer term impacts. This is partly in response to the measurement problem, i.e., that more immediate impacts are easier to get at and are more visable. However, incremental impacts over a longer period of time may be more important in many cases.

How Is Evaluation Used?

There are many dimensions one might consider here. I want to focus on two, more by way of example than because they are definitive, although they have been particularly important in the evaluation utilization literature. Evaluation utilization can be planned or unplanned, and can be formal or informal. Planned utilization occurs when the intended use of the evaluation is identified at the beginning and then subsequent utilization follows and is judged by planned or intended use. Unplanned utilization occurs when, in the typical case, the evaluation is designed without particular attention to questions of utilization and questions of use are left until the data are collected and analyzed. Eleanor Chelimsky argues that the most important kind of accountability in evaluation is utilization

that comes from "designed tracking and follow-up of a predetermined use to predetermined user" (1983:160). Chelimsky calls this a "closed-looped feedback process" where "the policy maker wants information, asks for it, and is interested in and informed by the response" (1983:160). From this perspective, the most important question in researching the utilization of evaluation is whether the evaluation had its intended use. This solves the problem of defining utilization, addresses the question of who the evaluation is for, and builds in a time frame since the predetermined use would necessarily have a time frame.

The problem here is the same problem that emerges in evaluation itself when attention is directed only to the stated and explicit goals of the project. The debate that led to Scriven's proposal for goal free evaluation included concerns about attention to unanticipated consequences, side effects, and unstated goals as important outcomes of programs. Attention only to explicitly stated goals would miss these other impacts. Likewise, in looking at utilization, limiting attention to the explicitly stated expectations for utilization will miss longer term, unintended, and unplanned uses, any of which may be quite important.

Another aspect of how evaluations are used that has become important is whether uses formal or informal. The early research on utilization focused on formal uses, that is public, observable, and explicit uses of published findings. We have since learned that informal uses are often more important. This is the transfer of findings by word of mouth, in unplanned discussion groups, and in one-to-one interactions between the evaluator and program staff, administrators, and/or funders. Such informal interactions often go well beyond official evaluation findings, and it is in the informal process of utilization that the evaluator himself or

herself is likely to be used as much as or more than either the formal evaluation process or findings.

Where Is Evaluation Used?

The problem of where evaluation is used has emerged most directly in efforts at satisfying the different needs of evaluation users at the local, state, and national levels in education. Framed in this way the question of where is closely related to the question of who. But the question of where the evaluation is used is a larger dimension in that evaluation designs and potential uses at the national level are quite different from those aimed at local utilization. In a perfect world, the kind typically demanded by political rhetoric, a single evaluation would be useful at all levels from the local extension district up through the federal government. In reality, the information needs of these different units are dramatically different. Indeed, the most common problem I encounter in evaluation consulting is dealing with the conflicting information needs of people at different levels of government. The state system imposes data collection requirements on local units that they perceive to be useless while data collected entirely by local initiative seldom meets the needs of either state or federal governments. Local units tend to prefer highly idiosyncratic and situationally specific data. Larger units tend to prefer standardized data which makes aggregation and comparisons easier. All of the dimensions of utilization vary according to where the evaluation is used. One of the greatest challenges for evaluations that are part of management information systems is responding to utilization needs at these different levels.

Why Is Evaluation Used?

The "why" of evaluation use has focused most often on the distinction

between formative and summative evaluations. Indeed, the classic formative-summative distinction was intended to define different kinds of evaluation use, i.e., evaluations aimed at program development and improvement versus evaluations aimed at major go/no-go decisions and/or major funding decisions. In practice, however, the "why" question is considerably more complex than this. The reasons evaluations are used, or not used, run the gamut of human motivations and schemes. There are highly political reasons why evaluations are used or not used. There are personality dimensions to this problem. There are personal value reasons, and matters of personal integrity and motivation. There are reasons having to do with human factors, context factors, and characteristics of the evaluation. Indeed, the question of why evaluations are used leads directly to the research literature which reports on the factors which affect evaluation use, which explain utilization, and which describe varying conditions under which utilization takes different forms. Indeed, most of the research on utilization has focused on identifying the factors that contribute to use rather than on variations in utilization itself, this later point having been the focus of my discussion thus far.

James Burry (1984) has done a thorough review of the evaluation utilization literature aimed at a synthesis of factors which appear to have a bearing on the degree to which evaluation information may be used. He organizes the various factors in three major catagories: human factors, context factors, and evaluation factors.

> Human factors reflect evaluator and user characteristics with a strong influence on use. Included here are such factors as people's attitudes toward and interest in the program and its evaluation, their backgrounds and organizational positions, and their professional experience levels.
>
> Context factors consist of the requirements and fiscal restraints facing the evaluation, and relationships between the program being

evaluated and other segments of its broader organization and the surrounding community.

Evaluation factors refer to the actual conduct of the evaluation, the procedures used in the conduct of the evaluation, and the quality of the information it provides (Burry, 1984).

The Burry review, in conjunction with and as a part of the framework developed by Alkin et al (1979), presents a comprehensive look at the factors affecting evaluation. The primary weakness of the synthesis and of the framework developed by Alkin et al (1979) is that the factors are undifferentiated in terms of importance. The synthesis represents a checklist of factors which can influence evaluation, and the literature which is synthesized suggests the conditions under which certain factors will emerge as important, but no overall hierarchy is suggested by the synthesis, i.e., a hierarchy which places more importance on certain factors as necessary and/or sufficient conditions for evaluation utilization. In the next section I want to take on this problem of differentiating the relative importance of various factors which explain utilization.

THE PERSONAL FACTOR

I want to suggest that the personal factor is the most important explanatory variable in evaluation utilization. I make this assertion quite deliberately in order to be provocative. The personal factor emerged as the most important variable in the initial research that led to Utilization-Focused Evaluation (Patton, 1978). A great deal of subsequent research has validated the importance of this factor, and I know of no research which would indicate that it is not the key variable in utilization.

The personal factor has to do with the interests and commitments of

the key people involved in the evaluation. Where the key people are interested in, committed to, and involved in the evaluation for the purpose of making sure that it is useful, then the evaluation is likely to be used. Where those interests, commitments and involvement are not present, evaluation is considerably less likely to be used.

The personal factor is general in conceptualization. It includes several, but not all, of the factors listed in the Burry synthesis as "human factors." However, I prefer the term "personal factor" to "human factors" because the phrase, "the personal factor," is meant to explicitly communicate that the personal characteristics of individual people is what makes the difference. This is in strong contrast to structural, organizational, and methodological explanations.

Identification of the personal factor as the key explanatory variable also provides a bridge from description to prescription. Given that the standards for educational evaluations (1981) have included a clear mandate for evaluator accountability which holds forth the ideal that evaluations first and foremost should be useful, it seems to me appropriate to use our knowledge of factors affecting the utilization of evaluation to make prescriptive statements that will guide evaluators in their efforts. Such prescription goes beyond saying that one ought to take a certain list of factors into account when designing the evaluation. A prescriptive statement that is research-based would tell evaluators <u>how</u> to take those factors into account. The personal factor provides such a prescription by saying one takes those factors into account in terms of the values, interests, and understandings of the people who are to use the evaluation results.

For example, I began this paper by reviewing the problem of different

definitions of evaluation. A neutral checklist approach to evaluation practice would advise the evaluator to understand that there are different definitions of evaluation and to be sure to define what kind of evaluation is being undertaken in a particular effort. However, a utilization-focused approach built on the importance of the personal factor provides more direct advice about how to proceed. A utilization-focused approach begins by finding out the perceptions and definitions of the people with whom one is working. Before the evaluator unilaterally defines evaluation, the evaluator should work to discover the perceptions, confusions, expectations, and beliefs about evaluation of those people who will be the primary users of the evaluation. It is then possible to build on that knowledge to develop shared understandings about evaluation options and potential processes. It is often appropriate simpdy to ask the people with whom one is working to associate freely in a stream-of-consciousness fashion with the word earticipants to define evaluation. The question, "Who can give me a definition of evaluation?" clearly implies a single right answer, and the wary participant will suspect that the evaluation trainer or facilitator will eventually pronounce the correct definition, but only after making several participants look stupid. Definitions are thus perceived as academic playthings to be used in a game at which the researcher is sure to win, so why participate? I'm not looking for skill at constructing or repeating definitions. I'm looking for perceptions and synonyms that will provide clues to tacit definitions held by people in the situation in which I'm looking. With these perceptions made explicit it is then possible to consider other alternatives and end by defining evaluation in a way that is relevant to the people who are going to use the evaluation.

In bridging the gap between description and prescription, the gap between a list of possible factors and the more direct identification of how those factors come into play, it is possible to use our knowledge of evaluation utilization to state a set of premises or prescriptions about how to increase utilization. Those premises constitute what I have called "utilization-focused evaluation." I am presenting them here because they lead to a research agenda for studying extension evaluation.

UTILIZATION-FOCUSED EVALUATION PREMISES

1. Basic Premises of Utilization-Focused Evaluation

The first premise is that concern for utilization should be the driving force in an evaluation. At every point where a decision about the evaluation is being made, whether the decision concerns the focus of study, design, methods, measurement, analysis, or reporting, the evaluator asks: "How would that affect the utilization of this evaluation?"

The second premise is that concern for utilization is on-going and continuous from the very beginning of the evaluation. Utilization isn't something one becomes interested in at the end of an evaluation. By the end of the evaluation, the potential for utilization has been largely determined. From the moment decisionmakers and evaluators begin conceptualizing the evaluation, decisions are being made which will affect utilization in major ways.

The third premise is that evaluations should be user-oriented. This means that the evaluation is aimed at the interests and information needs of specific, identifiable people, not vague, passive audiences. Therefore, the first step in utilization-focused evaluation is identification or organization of specific decision makers and information users. The

evaluator must determine who the potential users are, and aim the evaluation at those users.

A fourth premise is that, once identified, these interested decision makers and information users should be personally and actively involved in making decisions about the evaluation. Working actively with people who have a stake in the outcomes of an evaluation (the "stakeholders") is aimed at increasing the potential for utilization by building a genuine commitment to and understanding of the evaluation over the course of the evaluation process. Such an approach recognizes the importance of the "personal factor" (Patton, 1978) in evaluation utilization. People who are personally interested and involved in an evaluation are more likely to use evaluation findings. The best way to be sure that an evaluation is targeted at the personal concerns of stakeholders is to involve them actively at every stage of the evaluation.

A fifth premise is that there are multiple and varied interests around any evaluation. Field staff, administrators, clients, public officials, and community leaders all have an interest in evaluation, but the degree and nature of their interests will vary. The process of identifying and organizing stakeholders to participate in an evaluation process should be done in a way that is sensitive to and respectful of these varied and multiple interests. At the same time, it must be recognized that resource, time, and staff limitations will make it impossible for any single evaluation to answer all possible questions, or to give full attention to all possible issues. Identified decision makers and information users, representing various constituencies, should come together at the beginning of the evaluation to decide which issues and questions will be given priority in the evaluation in order to maximize the utility of the

evaluation. The process of focusing the content of the evaluation should not be done by evaluators acting alone, or in isolation from users.

A sixth premise is that careful selection of stakeholders for active participation in the evaluation process will permit high quality participation, and high quality participation is the goal, not high quantity participation. The quantity of group interaction time is often inversely related to the quality of the process. Thus, evaluators conducting utilization-focused evaluations must be skilled group facilitators and have a large repertoire of techniques available for working actively with stakeholders in the evaluation (Patton, 1981). High quality involvement of stakeholders will result in higher quality evaluations. Many evaluators assume that methodological rigor will inevitably be sacrificed if non-scientists collaborate in making methods decisions. This need not be the case. Decision makers want data that are useful and accurate (Weiss and Bucuvalas, 1980). Skilled evaluators can help non-scientists understand methodological issues so that they can judge for themselves the trade-offs involved in choosing among the strengths and weaknesses of design options and methods alternatives. Such involvement in collaborative deliberations on methodological issues can significantly increase stakeholders' understanding of the evaluation, while giving evaluators a better understanding of stakeholder priorities and situational constraints on the feasibility of alternative approaches. These shared decisions can thus enhance both utilization potential and methodological rigor.

A seventh premise is that evaluators committed to enhancing utilization have a responsibility to train decision makers and information users in evaluation processes and the uses of information. By training

stakeholders in evaluation methods and processes, the evaluator is looking to both short-term and long-term utilization. Making decision makers more sophisticated about evaluation can contribute to greater use of evaluation data and evaluation processes over time.

An eighth premise is that there are a variety of ways in which evaluation processes and findings are used, a point noted earlier. Evaluations can directly influence major, specific decisions. Evaluations can be used to make minor adjustments in programs. Decision makers can, and do, use evaluations to reduce uncertainty, enlarge their options, increase control over program activities, and increase their sophistication about program processes. Sometimes evaluations have more of a conceptual impact, i.e., they influence how stakeholders think about a program, rather than an instrumental impact, i.e., evaluation utilization manifested in concrete actions and explicit decisions. A broad view of utilization reveals multiple layers of impact over varying amounts of time. All of these kinds of utilization are important and legitimate form a utilization-focused evaluation perspective. This view of utilization also broadens the notion of evaluation impact to include use of the entire evaluation process as a stakeholder learning experience, not just use of the findings in the final report. The relative valuae of these different kinds of utilization can only be judged in the context of a specific evaluation. There is no universal hierarchy where some kinds of use are always more valuable.

A ninth premise is that attention to utilization involves financial and staff time costs that are far from trivial. The benefits of these costs are manifested in greater utilization. These cost should be made explicit in evaluation proposals and budgets so that utilization efforts

are not neglected for lack of resources.

A tenth premise is that a variety of factors affect utilization. These factors include community variables, organizational characteristics, the nature of the evaluation, evaluator credibility, political considerations, and resource constraints (Alkin et al, 1979) In conducting a utilization-focused evaluation, the evaluator attempts to be sensitive to and aware of how these various factors affect the potential for utilization. An analysis of the factors that may affect the usefulness of an evaluation should be undertaken jointly with stakeholders early in the evaluation process. These factors, and their actual effects on utilization, are then monitored throughout the utilization-focused evaluation process.

TESTING THESE PREMISES IN PRACTICE

The integrated nature of these premises with the underlying importance of the personal factor suggests to me the primary direction for future research on evaluation in extension. That direction is to test these premises in an integrated way in real evaluations. By an integrated way I mean that it is important to look at utilization in terms of the related factors and processes that occur from beginning to end from a fairly holistic perspective. Studies that focus on one or two single, isolated factors are of little use in extending our knowledge of real utilization processes. Laboratory experiments aimed at testing out what happens if people have more or less information, or some other single factor taken in isolation from real world settings, is also of little use. The premises stated above mean that extension research on evaluation must necessarily be holistic and must look at entire evaluation processes from beginning to

end. There is no other way to test out these premises because they are not subject to simple manipulation of operational variables.

By way of illustrating how such tests can proceed, I would like to describe a recent extension evaluation project which employed a utilization-focused evaluation perspective and permitted what has been in my experience the most comprehensive test of utilization-focused evaluation in a real world project. That project is the Caribbean Agricultural Extension Project for which I act as Project Director. Thus, my account of the external evaluation of that project and its use is necessarily subjective. However, even as this paper is being written the chair of this external evaluation is also independently reviewing the utilization process.

A CASE EXAMPLE OF UTILIZATION

The Caribbean Agricultural Extension Project is a U.S.AID-funded project aimed at improving national agricultural extension services in eight Caribbean countries. With staff from the University of Minnesota and the University of the West Indies, the project has involved organizational development work with key officials in the eight countries, providing in-service training for extension staff, and providing equipment including vehicles, office equipment, and agricultural equipment.

The project was designed based on 1-1/2 years of needs assessment and planning. The assessment and planning included establishing an advisory committee in each country as well as a regional advisory committee made up of representatives from all eight participating countries and other organizations involved in agricultural development in the Caribbean.

The contract for implementing the project with all key participants

was signed in January, 1983. In April, 1983, a meeting of the Regional Advisory Committee was held with a team of external evaluators. The external evaluators were chosen to represent the major constituencies of the project, these being (1) U.S.AID, (2) the University of the West Indies, and (3) the Midwest Universities Consortium for International Activities (MUCIA) for which the University of Minnesota was the primary representative. Each of these three prime constituencies named one of the evaluators. The fourth evaluator was chosen for his stature in the field of evaluation, because of his commitment to user-oriented evaluations, and because he was neutral from the point of view of the other three constituencies. He was made chair of the evaluation team so as to represent neutrality in collaboration with the three evaluators who had been named by specific constituencies as able to represent their points of view.

Prior to designing the evaluation, the evaluators met with representatives from each of these constituencies separately, including the funding source U.S.AID. At the April meeting of the regional advisory group, the evaluators focused three days of discussion on the criteria which could be used to determine if the project had been successful. These criteria constituted a set of questions and primary outcomes, but were not quantitative indicators. Based on those discussions the evaluators reviewed design possibilities with the fifty participants in that regional advisory meeting. The details of the design were then worked out with specific representatives of the project staff and U.S.AID.

The evaluation design included several different foci. The project staff organized all of their required reporting around the evaluation design. The work plan for project staff was also developed based on the

evaluation elements and staff meetings routinely reviewed the elements of the evaluation as a way of directing implementation and focusing on those outcomes which were primary from the point of view of the project and the evaluation. Members of the evaluation team were sent monthly and quarterly reports based on the elements of the evaluation. For example, the first element in the evaluation design was that in each country a national agricultural extension planning committee be operating and involved in providing direction to the extension service in its country. All staff meetings began by reviewing the progress of national planning committees and all monthly and quarterly reports include information on the activities and progress of national committees. In addition, the minutes of the national planning committees were provided to the evaluators. In the actual data collection phase the evaluators conducted interviews to gather firsthand information about the operations and activities of the the national planning committees. The point here is that program implementation and evaluation were synchronized from the beginning of each. More importantly, the evaluation process had a major impact on improving program implementation from the very beginning by focusing program implementation. The evaluation provided a framework for program planning and reporting that provided focus to staff activities. This focus became more important as the project moved forward and staff encountered many opportunities to be diverted from those primary foci. However, having organized the project work plan, staff meetings, and reporting around the key evaluation elements, the evaluation contributed substantially to keeping staff efforts from being diverted into other areas or activities which would have taken away from the primary purpose of the project. This is an example of utilization of evaluation processes for program

improvement.

Data collection and reporting were carefully timed to provide critical information for refunding decisions. Working backwards from the project completion date, a time schedule for data collection and reporting was developed which would make sure that the information was available when the decision about refunding and future project activities was to be made. This was a major break with U.S.AID tradition. Indeed, the evaluators and project staff had some difficulty helping U.S.AID personnel understand why the evaluation was taking place so early in the life of the project, early from their perspective. Traditionally, U.S.AID evaluations occur after a project is completed to provide a mandatory report on project impacts. That means that the traditional U.S.AID evaluation is presented six months to a year after a project is terminated or a new funding decision has been made. There is no possibility of the evaluation playing a role in that decision making. It was unprecedented for U.S.AID to get an evaluation report, at least one that was more than cursory, at the time of a funding decision. In this case operational project funding would end in September, 1985. Given the lengthy funding process of U.S.AID a decision for additional funding and activities would have to be made by December, 1984, to do the paperwork to keep the project alive. Thus, a meeting of the Regional Advisory Group was scheduled for November, 1984, to focus on the evaluation findings. This meant that the report would have to be ready by that time so the data collection would have to take place in the Summer of 1984, only 1-1/2 years into project implementation and only a year after the initial design, fully a year ahead of the operational project completion date. Clearly, such an evaluation could not be definitive about project impacts since data collection would take place well before project

completion, but a definitive data collection effort would not be available at the time the decision was to be taken. Data collection did occur in June of 1984 and the evaluation report was ready for the Regional Advisory meeting in November, 1984. Prior to that critical November Regional Advisory Committee Meeting, the evaluators met separately with project staff to provide informal feedback about evaluation findings and with U.S.AID to provide informal feedback and discussion of potential future funding. In both cases those informal meetings were critical.

The first informal meeting occurred immediately after data collection in June, 1984. The evaluators, who had been gathering data in different locations, met together to review their findings and divide the writing tasks. Following that session together, the evaluators met with the project director to review major findings. Those findings included a confirmation of the overall successes of the project, the high degree of support for project activities among the participating countries, and identification of areas of weakness. The areas of weakness included insights which had escaped the attention of project staff. The staff immediately began to correct those weaknesses, two of which required assistance from outside and one of which brought a new focus to implementation activities. A month later one representative of the evaluation team met with the project staff in their full staff meeting and reviewed the evaluation findings. It was at that staff meeting that activities were reoriented to direct attention to identified weaknesses.

Following the staff meeting, the evaluator who had been selected by U.S.AID met with U.S.AID officials to informally report initial findings. At that meeting the question of future funding arose. The director of the funding agency, U.S.AID, had been present in the initial meeting with the

evaluators where important questions were identified. He now put those questions to the evaluator again with special reference to future activities. The evaluator was able to directly address this question with high credibility and with concrete data. It has subsequently been reported to me independently by several U.S.AID staff that this informal feedback was critical because the director of the funding agency was not predisposed to continue funding for the project. The evaluation report made it clear that the project was effective, was having an impact, but that further funding and activities would be necessary and justifiable to institutionalize short term successes and guarantee long term success and long term effectiveness. With the November, 1984, Regional Advisory meeting already scheduled, and with the informal evaluation results having been reported to the funding agency, I wrote to U.S.AID asking for them to take a position on their openess to future funding, I asked for a response prior to the November, 1984, meeting of the Regional Advisory group since the delegates to the Regional Advisory Group would need to know AID's position as a context for their discussions of the evaluation. Prior to that meeting U.S.AID indicated that they had reviewed the evaluation and were inclined to continue funding activities. They therefore invited project staff and the Regional Advisory group to submit a continuing proposal.

The published evaluation report was completed in time for the November Regional Advisory meeting. At that meeting the evaluators reviewed overall findings and different ways in which the report could be used for local purposes as well as regional purposes. Delegates to the meeting reviewed the executive summary and commented on its accuracy. They then adopted a resolution accepting the evaluation report as generally accurate, fair,

thorough, and balanced. They suggested that project staff use the evaluation findings as a basis for future activities and a new proposal to U.S.AID. They discussed major new directions suggested by the evaluation findings. They brought to bare on those discussions other information and their own experiences, and subsequently adopted resolutions identifying the major components that should be included in continuing activities.

In the interim between the data collection, informal feedback and the formal November review of the evaluation, project staff had made major progress in overcoming the weaknesses identified in the preliminary feedback. In addition, through the grapevine, the fact that the evaluation report would show substantial progress and major successes was communicated throughout the region. Project staff and U.S.AID had the opportunity to comment on draft copies of the report before it was published to guarantee accuracy and so as to know details of what the report would say prior to its publication.

Thus, the evaluation had a major impact on project implementation. It had a major corrective effect in reorienting the project a year and a half into implementation so as to correct weaknesses that had emerged during that time and to more directly focus on some areas that were being neglected. Finally, the evaluation had a major impact on the decision to continue project funding.

The evaluation direct costs were approximately $100,000 out of a total project budget of $5.4 million dollars. This is under two percent of the project budget.

While the details of this evaluation are skimpy to preserve space, all of the premises of utilization-focused evaluation were followed in this evaluation and the result was a high level of use. Of course, this design

does not permit one to make causative statements about the relationship between what was done and what subsequently occurred. However, there is no question among the nine project staff members nor the U.S.AID officials that both the evaluation processes and outcomes made important differences. Likewise, the resolution adopted by the Regional Advisory group made it clear that they had learned from the evaluation both about the project and about how evaluations ought to be conducted.

Issues Needing Clarification

This discussion leads me to five issues that continue to create confusion in the field. At the recent ERS-ENet meetings in San Francisco I found evidence that these issues are alive and well. In some cases it seems to me we can put them to rest. In other cases new work is needed. These issues are:

1. What is the relationship between quantity and quality of interaction between evaluators and decision makers?

2. How does heavy involvement of stakeholders in an evaluation affect methodological quality?

3. What, if any, is the hierarchy of desired impacts from an evaluation i.e., is immediate action a "greater impact" than long term effects on program thinking and conceptualization?

4. Is there a hierary in terms of the parts of an evaluation that ought to be used, i.e., is use of findings more important than use of the process, and are both more important than use of the evaluator?

5. Is predetermined use for predetermined users more important than unintended use in unintended ways?

Permit me to elaborate on the background which gives rise to these questions. The importance of the personal factor and its manifestation in "stakeholder-based evaluations" has led to confusion about the nature of evaluator involvement with key decision makers and information users. This is sometimes called "the stakeholder assumption."

The "stakeholder assumption" is the idea that key people who have a stake in an evaluation should be actively and meaningfully involved in shaping that evaluation so as to focus the evaluation on meaningful and appropriate issues, thereby increasing the likelihood of utilization. A consultative evaluation approach is based on the stakeholder assumption. In recent years, as evaluators have become increasingly concerned about utilization, the stakeholder assumption has received widespread attention. Doubts have been raised about the validity of the assumption. Nick Smith, for example, president of the Evaluation Network during 1980, wrote in his column in the Evaluation Network Newsletter that the assumption was being accepted without sufficient empirical evidence to support the supposed relationship between stakeholder involvement and utilization of findings.

> Although this (the stakeholder assumption) appears to be a widely held belief, no one has bothered to test it empirically. From a recent 16-state study of local district school accreditation evaluations, I have found that data from school board members and administrators with first-hand experience in such evaluations do not agree with this assumption. These individuals do not want to be personally more involved in such studies, nor do they believe that their involvement will make the evaluation results more useful to them. In fact, for these school board members and administrators, the correlation between their judgments of a past evaluation's utility to them was only 0.3, while there was a 0.7 correlation between their judgments of the evaluation's quality and its utility. Hardly strong support for the considerable effort now being expended at the local, state, and federal level to increase the involvement of various groups in evaluation (Smith, 1980: 39).

Smith's doubts about the validity of the stakeholder assumption provide an opportunity to clarify my own interpretations about what the stakeholder assumption means in practice. His critique includes some common misconceptions about the collaborative approach to utilization-focused evaluation which give rise to the issues outlined above.

First, there is the question of the nature of the relationship between stakeholder involvement and utilization. Smith states the relationship as a "necessary" condition. In the sentence preceding the excerpt quoted above, he said he was addressing "the currently popular assumption that increased involvement of clients and decision makers in evaluation activities will necessarily result in increased utilization of evaluation findings" (Smith, 1980: 39, emphasis added). From my point of view, the stakeholder assumption is somewhat overstated by Smith. I have never suggested, or heard others suggest, that increased stakeholder involvement in an evaluation will necessarily result in increased utilization. Nothing one can do, as near as I can tell, will guarantee utilization.

Second, there is a hint of a trade-off in Smith's skepticism implying that one must choose between stakeholder involvement and high quality data. Many evaluators assume that methodological rigor will inevitably be sacrificed if nonscientists collaborate in making methods decisions. This need not be the case. The ideal expressed in the new standards includes both utility and accuracy. Other research confirms Smith's findings that decision makers are concerned about "quality" of data, but quality includes both "truth tests" (accuracy) and "utility tests," the latter being a concern for relevance and applicability (Weiss and Bucuvalas, 1980).

Third, Smith's point is directed entirely at the quantity of stakeholder involvement in an evaluation. The variable "level of involvement" is somewhat ambiguous, but the implication is that it refers to amount of involvement in terms of time. In contrast, the emphasis in utilization-focused evaluation is on careful selection of the people with whom one works and the quality of the evaluation group process. The quantity of interaction time is often inversely related to quality.

Fourth, while I expect Smith is correct in saying that there is a dearth of empirical evidence that "increased involvement" (if he means greater quantity) leads to greater utilization, there is substantial evidence that high-quality involvement of the right people contributes substantially to utilization. The massive diffusion of innovation literature (e.g., Havelock, 1971, 1973; Rogers and Shoemaker, 1971) is replete with relevant empirical evidence. The formal organizations, participatory management, and small group literatures in psychology and sociology provide substantial data relevant to this point (e.g., Hage and Aiken, 1970; Bennis, 1966; Azumi and Hage, 1972; Bennis et al., 1976; Argyris, 1972, 1974, 1976). These literatures document with empirical evidence the proposition that people are more likely to accept and use information, and make changes based on information, when they are personally involved in and have a personal stake in the decision making processes aimed at bringing about change. Most directly, there is a growing evaluation and policy analysis literature--an empirical literature--that supports the proposition that utilization of evaluation is enhanced by high-quality stakeholder involvement in and commitment to the evaluation process (e.g., Fairweather et al., 1974; Weiss, 1977; Patton, 1978; Alkin et al., 1979; Braskamp and Brown, 1980; Stevens and Tornatsky, 1980; Lynn, 1980; Dickey, 1981).

Fifth, evaluators should not expect much initial enthusiasm among stakeholders for the idea of participating actively in a research process. Past experiences are not likely to have been very positive. Most stakeholders are quite happy to leave evaluation to evaluators. They're also quite happy to ignore the resultant evaluation findings. Like a child who wants to avoid bad-tasting medicine (medicine, by definition, being bad

tasting), stakeholders would typically prefer to avoid being subjected to distasteful doses of evaluation (evaluation, by definition, being distasteful), even if they believe it's good for them. The evaluation practitioner, like the medical practitioner, must often cajole and otherwise persuade stakeholders to do what ought to be done. Getting cooperation and participation has to be worked at. Initial resistance is no reason to fall back on traditional patterns of operating alone, at least not if the evaluator is really committed to utilization. In my experience, if stakeholders won't get involved at the beginning of an evaluation, they probably won't pay it much heed at the end.

If utilization is viewed as use of the evaluation process and not just as final findings, then stakeholders must be involved in the entire process for the process to have the most impact. Much of the impact of evaluations on stakeholders comes through personal engagement in the difficult processes of goals clarification, issues identification, operationalizing outcomes, matching research design to program design, determining sampling strategies, organizing data collection, interpreting results, and drawing conclusions. These processes take stakeholders through a gradual awakening to program complexities and realities, an awakening that contains understandings and insights that will find their way into program developments over time, only some of which will be manifested in concrete decisions. Utilization begins as soon as stakeholders become actively involved in evaluation because that involvement, properly facilitated, forces them to think about program priorities and realities. The stakeholder assumption, then, includes the expectation that stakeholders need to expend time and effort to figure out what is worth doing in an evaluation; they need help in focusing on worthwhile questions; and they

need to experience the full evaluation process if that process, which is really a learning process, is to realize its potential, multi-layered effects.

To summarize, let me adopt the initial, rather general, statement of key issues that opened in this section. The following constitutes an agenda for research on extension in evaluation:

1. What is the relationship between quantity and quality of interaction between evaluators and extension decision makers?

2. How does heavy involvement of extension stakeholders in an evaluation affect methodological quality?

3. What, if any, is the hierarchy of desired impacts from an extension evaluation i.e., is immediate action a "greater impact" than long term effects on program thinking and conceptualization?

4. Is there a hierarchy in terms of the parts of an evaluation that ought to be used, i.e., is use of findings more important than use of the process, and are both more important than use of the evaluator?

5. Is predetermined use for predetermined users more important than unintended use in unintended ways? In extension evaluation, what are patterns of predetermined use? What are the patterns of unintended use?

These issues emerge from the implicit hierarchies and values that seem to me to be present in the current research on evaluation. These are not simply research issues. Rather, they have to do with how the research on utilization ought to be conceptualized for future work. <u>The most critical issue, however, for future research on evaluation is actually evaluating evaluations</u>. Since use is the expected outcome of evaluations, evaluating evaluation means studying evaluation use.

Before closing this paper, I would like to raise one additional issue for discussion. That issue is the misutilization of evaluations.

MISUTILIZATION

If it is not already clear to the reader, let me make it absolutely clear: I believe that we already know enough about how to increase the utilization of evaluations that the immediate task is acting on what we know and evaluating those actions rather than doing further isolated research on utilization. In so acting, and in order to be accountable, evaluators ought to document their experiences in using what we know. In presenting my recent experiences with the Caribbean Agricultural Extension Project as a test of utilization-focused evaluation premises, I have indicated in very brief fashion how such documentation might take place. For my part, however, I don't look for any major new breakthroughs in research on the utilization of evaluation. I'm satisfied that if we actually begin to use what we already know, we could make a significant difference in evaluation practice.

I have become, however, increasingly concerned about problems of misutilization. The most common criticism I hear of utilization-focused evaluation in extension is that it co-opts evaluators. This is a particular problem within state programs where evaluation units are internal to extension and often used by state administration as public relations units rather than evaluation units. This cooptation reduces evaluation credibility, neutrality, and significance.

In our concern with and focus on ways of increasing the utilization of evaluation, I agree with those who worry that we have neglected misutilization. As I do workshops and travel around the country talking with extension people about evaluation, I hear increasingly about cases of abuse and misuse. As I've thought about this, I'd like to share some preliminary observations by way of generating additional discussion and

research on this important issue.

1. Misutilization is not at the opposite end of a continuum from utilization. There are really two dimensions here. One dimension is a continuum from nonutilization to utilization. A second continuum is non-misutilization to misutilization. Studying misutilization is quite different from studying utilization.

2. Having conceptualized two separate dimensions, it is possible to explore the relationship between them. Therefore, permit me the following proposition: <u>as utilization increases, misutilization will also increase</u>. It seems to me that when people ignore evaluations, they ignore their potential uses as well as abuses. As we successfully focus greater attention on evaluation data, and as we increase actual use we can also expect there to be a corresponding increase in abuse, often within the same evaluation experience.

3. Misuse can be either intentional or unintentional. Unintentional misutilization can be corrected through the processes aimed at increasing appropriate and proper utilization. Intentional misutilization is an entirely different matter to which, it seems to me, we have paid very little attention except to say it shouldn't happen. In terms of incidence and prevalence, I have no clear notion of whether unintentional or intentional misuse is more common.

4. A comprehensive approach to the study of misutilization might well be guided by the same six honest serving men who framed my initial discussion of this paper of utilization.

1. What is misused?
2. Who misuses evaluation?
3. When is evaluation misused?
4. How is it misused?
5. Where is misused?
6. Why is it misused?

What better way to approach dishonesty and misuse than by mobilizing these six honest serving men in the service of appropriate evaluation utilization?

SUMMARY

Future research on extension evaluation should be framed in light of the major issues in the professional practice of evaluation and in light of what we already know. I suggest in this paper that the critical issue is utilization of evaluation.

This means that future research on extension evaluation should focus on testing what we know (or think we know) about increasing use. Such a focus would include evaluating evaluations, i.e., determining the extent to which evaluations are doing what they're supposed to do -- provide useful information to intended users for program improvement and decision-making. Research on utilization should be balanced with parallel research on misutilization of evaluation.

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NEEDED RESEARCH IN PROGRAM DEVELOPMENT

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NEEDED RESEARCH IN PROGRAM DEVELOPMENT

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Before suggesting what I believe to be needed areas of research in program development in Extension, I would like to set a context within which program development occurs and move from there to a specific focus.

Peter Drucker, the respected management consultant, has a famous question he uses on his first visit to a client: What business are you in? Frequently his clients have difficulty answering this question. How would you answer that question? What business is Extension in? We are in the business of Extension; but what is the business of Extension? Is the answer that we are in the business of dissemination of information? The Smith-Lever Act says that we are "to disseminate among the people of the United States useful and practical information on subjects relating to agriculture and home economics...". I hear many Extension professionals saying that this is our mission. We have research information which people can use and our task is to disseminate. One of my students interviewed for an Area Specialist position in agriculture and was told that this was what was expected of him; to be an information dispenser. He was disturbed at this because he had learned from me that there is much more to the job of being an Extension staff member than dispensing information and he did not think that this was an appropriate assignment for an Area Specialist (or any Extension staff member).

The more appropriate answer to this question, what business is Extension in, in my judgement, is also derived from the Smith-Lever Act and is a continuation of the sentence which includes "to disseminate" but goes on to say "and to encourage the application of the same." This means "education," identifying specific audiences, working with them to assist them in the identification of needs, assisting them in acquiring information, evaluating it (for their use), in learning how to use the information in their situation, and in evaluating the results of the

use of the information. I reject the first answer to the basic question: What business are we in?; primarily because of what the law says about encouraging the application of information, but I also reject it on the basis of survival for Extension. There are now many who are in the business of disseminating information, both private and public groups, companies and businesses. They secure much of their information from the same sources that Extension does, Land-Grant universities and research programs. If the private sector is willing and able to disseminate quality information, and they have proven that they are willing and able, how much longer will public funds be appropriated to Extension if our business is to disseminate information? ALL Extension staff members, and especially administrators and program leaders, need to recognize that we are in the business of education, of which the dissemination of information is only a part.

If we are in the business of education, then an appropriate question is: What kind of education business are we in? The plight of the railroad system in this country has been frequently explained by the fact that the railroads always thought that they were in the railroad business when, in fact, they were in the transportation business. While busses, trucks and autos combined with the development of a dependable network of highways, while an extensive passenger and freight airways system developed, and while improvements were made which gave new life to our network of waterways, the railroads continued to operate as if these developments would not affect them. In my judgement, Extension should not fall into the same trap as the railroad companies by assuming that we are in the business of Extension. I say the same trap because as the railroads tended to ignore what was taking place in the transportation business, Extension is in danger of ignoring what is taking place in the education business and the impact of other programs on Extension.

We are not in the business of Extension, we are a part of a recently recognized phenomenon known as lifelong learning. Within the totality of lifelong learning, we are in the phase known as adult education. Extension is in the business of adult education. (Most of the professional work of 4-H staff members is really adult

education.) While we have been in this business since before 1914, and we were one of the very few at that time, there are now many "newcomers." The community colleges have evolved and have recently greatly expanded their adult education programs. The modern library has changed significantly from the days of Marian the Librarian of Music Man fame. Most are now dynamic learning centers with all modern educational resources as well as the traditional printed materials. Private enterprises have evolved and are in the midst of expansions. They offer conferences, seminars, and information dispensing along with consulting services which are frequently combined with computer services and other systems approaches. Public groups and quasi-public groups provide educational programs in agricultural production and marketing, nutrition, child development, financial management, community and economic development, and many more. There are now many actors on the stage which Extension once had to itself. A 1976 report listed 275 different adult education programs being conducted by the Federal Government. A conference held last month in the Midwest on "Serving the Rural Adult, An Action Agenda for Postsecondary Education," included presentations by 26 individuals, only two of these were from Cooperative Extension. Also last month, the Missouri Valley Adult Education Association, a professional organization of adult educators from seven upper midwest states, held its 41st annual conference. Of the 36 sessions presented, one dealt with activities of the Cooperative Extension Service. Recently a forward looking group of Extension leaders have recognized that they have much to learn from other adult educators and vice versa and have established within the American Association for Adult and Continuing Education, the umbrella organization in the field, a unit made up of those whose primary interest in the Cooperative Extension Service. The current chair of that unit is Dr. Clarence Cunningham of the Cooperative Extension Service of Ohio State University. This is a major step toward recognizing what business we are in and who are our partners--and maybe competitors.

In 1978 I had the opportunity to spend seven months in Western Europe studying the Extension program in seven countries. An interesting observation was that in

each country, the Extension program recognized the total network of organizations and agencies which provided educational programs for rural clients. When I asked about the Extension organization, I was always told about the plant food manufacturing company, the animal breeding cooperative, the adult study circles, and similar groups which conducted educational programs. As a minimum, Extension in the U.S. needs to conduct itself with full knowledge of the other actors on the stage.

I hope that I have developed the case that we need to see ourselves as being in the business of adult education. The business of education, like all businesses, requires organization, planning, implementation, and evaluation. In education we call this program development, but there are many different definitions for this phrase and changing situations throughout the years (e.g. more actors; more information; more means of communication) require us to select the base from the past and present as we consider this phrase and its meaning. I need to give the model which will be used here. Program development is what Extension (or any other adult education operation) is all about. We don't exist to administer a program. We don't exist to create an image. We don't exist to spend public funds. We exist to provide an educational program from our land-grant university knowledge base to the people of our respective states who have need for and who can use that information. This program development process involved need determination (what do people want to learn; what are their educational needs); it involves the development of strategies to assist people in acquiring, evaluating, and using information, and it involves the assessment of the effectiveness and results of using that information. It then involves implementing these planned strategies and following through on the assessments. My model of program development puts this in an interactive relationship; all of which rests on a base of an organizational framework.

The organizational and administrative area has been discussed here, as has the evaluation processes, so I will not spend time on them except to recognize the

interrelationships and where each fits into the total model (see Figure 1). The reason that Extension exists as an organization is to conduct educational programs which are meaningful to people; that is why we exist; this is the basis on which our future depends; this is the basis on which we should be held accountable. Without programming, we have no need to exist.

Given that we are in the business of adult education, and that means programming, and given this definition of what is included in program development, what research is needed? First, I would stress the need for collaborative, interdisciplinary research. This is not a new idea; it exists in many camps. Research projects involving individuals from a single discipline are rare. Journal articles sometimes have so many authors that it takes most of the first page of the article to list names and positions.

With what disciplines should Extension be collaborating? If not already working from this base, adult education would be first on my list. I would also include psychology--especially developmental psychology and within that subject the specialty of adult development; sociology--especially group interaction because of the impact of groups on learning and on community development; communication--especially communication theory and its application in non-formal learning situations (e.g. Paul Yarbrough at Cornell); anthropology--especially cultural anthropology and within that I am impressed with our need to understand the research methods they use; philosophy--especially the philosophy of the social sciences and their use in developing and testing theories. I do not intend to overlook the entire field of education--including educational philosophy; educational research (methodologies and tools); curriculum development; instructional methods including uses of the newer hardware and software available for use in the learning process (I have a concern here that we need to separate the fads from the basics and not be carried away by the fads). There may be other disciplines which can contribute to specific projects, but there might also be individuals in unexpected departments which could help. In our school, some people in the Department of Industrial Engi-

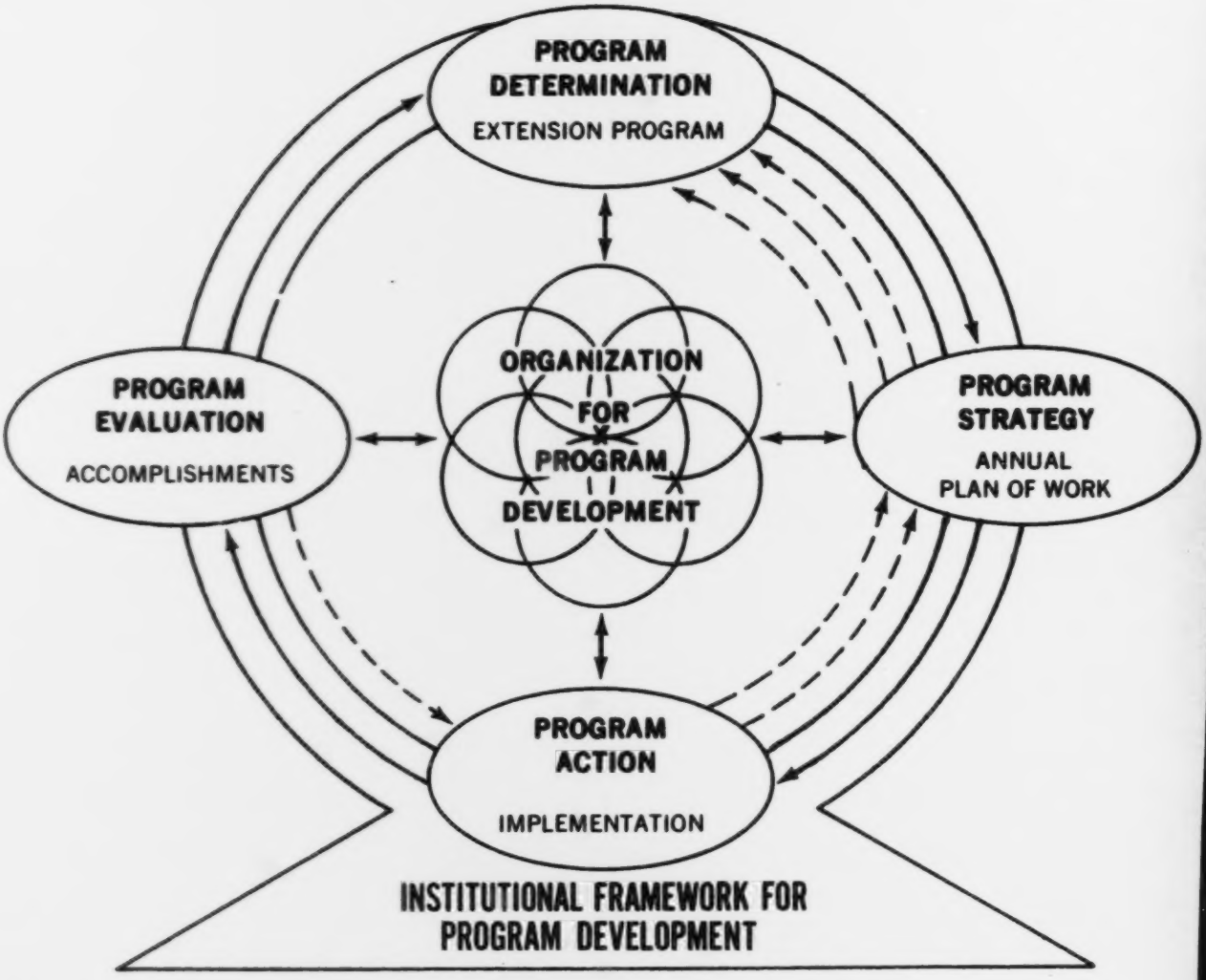

Fig. 1. Processes of Extension Program Development

neering are valuable resources in the area of developing human resource potential in business and industrial settings and have much to contribute to our work. In listing these various disciplines, I do not mean to overlook the disciplines of agricultural education and home economics education, but some of the work with which I have been involved and which I have seen could have benefitted from consideration of the concepts from some of the other disciplines I have mentioned. So my first point is that we plan and conduct program development research on an interdisciplinary basis. This can be and usually is frustrating, but it has the potential for more meaningful research on the program development processes.

The second need I would mention is for program development research to be based on a sound theoretical framework or model. This is also not a new idea but I mention it because I see more reports where it is not included than where it is. I think that this is understandable because of the lack of sound theories in extension education. By moving the frame of reference to adult education, as I suggested earlier, the situation will be some better but will still be a problem due to the lack of generally acceptable theories. What I am really saying is that there is a need for research which is oriented to developing and testing theories. When research is conducted without a theoretical base, it is not possible for research results to be additive. Too much of our extension education research has been the evaluation of a specific program and, without placing these results within a theory, the results are a "one time" incident. I think that we are in the same situation that much of agricultural research was a generation or more ago. I remember as a teenager reading the Believe It Or Not section in the Sunday paper about a development at the Ohio Experiment Station where scientists had developed a technique to make a hole into the rumen of a steer and to plug the hole when they wanted to. The report was that this would enable study of what goes on in the stomach. I later learned that prior to this innovation the usual research technique to determine the value of a ration was to formulate a ration, feed it, and measure the results. With access to the rumen, an entire new approach was possible--it was

now possible to study what actually happened to the feed as it started through the digestive tract. It was no longer necessary to use the trial and error method to formulate rations; they could be formulated on the basis of what was happening within the animal. Much of our research is still on the level of trying a specific technique and seeing what results we get. We need to secure access to the individual learners and learn more about what goes on in the learning process with them. This is our equivalent of the "hole in the rumen" technique and will enable us to go beyond the trial and error methods of research in program development.

While there is a lack of generally accepted adult education theories, there have been proposals which help. Boyd and Apps of Wisconsin have made a valuable contribution to providing a framework within which we can classify our work. This is one step. There are some theories and suggested theories with which we should be familiar. I will mention three names:

Patricia Cross: Participation Theory. This theory is valuable in any research concerned with participation in Extension activities. It can also be helpful in research on organizing learning activities.

Allen Tough: Self Directed Learning Theory. This theory is so important to Extension education that I will come back to it and discuss it later.

Paulo Freire: The interactive model which this innovative individual has developed and tested needs to be understood by all Extension staff members as well as be used in research projects involving needs assessment and teaching strategies. Don't be turned off by the very negative comments he has made about Extension.

Allen Tough's work and that of many others who have followed his line of research have shown us that adults do learn. In fact, a generalization can be made that 90% of adults can identify a learning project with which they have been involved and that they average eight such learning projects per year. The fact that most of these learning activities are self planned--in fact about 70%--has led to the name for this phenomenon, <u>self directed learning</u>. Adults are learning what they want to learn, when they want to learn, and are using a variety of resources in

planning and implementing this learning. A most interesting phenomena is that all of this is occurring with very little input from professionals. People simply do not seek help from professionals for the bulk of their learning. At the same time, we seem to be oblivious to, or ignorant of, adult's natural process of choosing and achieving a wide range of learning. As adult educators, we need to be doing research on why this type of learning is going on, but more importantly, we need to be doing research on how we can utilize our abilities as teachers and our subject matter resources to facilitate the learning which is going on. We need to build a more accurate and complete picture of this learning pattern, what factors and forces contribute to the planning and implementation of this learning, what additional help could be provided to help them learn, how this help could be provided, and what results we might anticipate from such help.

Needed research in Extension program development falls into the categories of interdisciplinary, theoretically based, and oriented to the natural learning processes which adults are expressing. Such research is not compatible with a graduate student thesis where each student chooses her or his own topic and proceeds to complete the research during the time of their graduate studies. A longer term research project is demanded. This does not preclude a graduate student from completing a significant portion of a larger and longer range project. This is, in fact, the pattern used in many, if not most, disciplines at present. This suggests that researchers need to develop and manage basic and long range research projects. These researchers may be professors at universities or they may be associated with private or public institutions--including units of the government such as the Extension Service at the federal level. When suggestions like this are made, the first question usually raised deals with sources of financial support for this type of research . My response is that, to a large measure, as far as research in the Extension phase of adult education is concerned, this must be a responsibility which the organization assumes. At the federal level there was at one time a unit which did research which was most appropriate for its time. That unit was disbanded some

time ago. The present program development unit is much more concerned with collecting data which can be stored in modern hardware and in using it for evaluation and accountability purposes than in any substantive work in improving program development processes. At the state level, some directors tell us that federal funding regulations forbid them from spending any funds for research on the learning processes of clients involved in their programs. This is true for Smith-Lever funds and those state funds which are required to match them. Each director has other funds, however, which are not under such restrictions. A competent accountant can devise a system which is perfectly legal and which would permit the expenditure of funds for basic and long range research on the Extension program development processes. Why would a director want to expend funds on this type of research when there are so many other demands for funds? My answer is that if adjustments are not made to focus Extension programming on the learning patterns of people, there will soon be no need for an Extension Service. People are learning without us. We know we have information, we have a delivery system, and we have educational know-how which would assist people in their learning and in making the process more efficient. If we cannot learn how to perform this educational role in the 1980's; if we cannot perform a significant role in facilitating the learning which people are seeking, the Cooperative Extension Service has a very limited future.

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THE COOPERATIVE EXTENSION SERVICE:
A NATIONAL ASSESSMENT

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THE COOPERATIVE EXTENSION SERVICE: A NATIONAL ASSESSMENT

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What will Extension look like in the year 2000? Can an organization started in 1914 as a way to get farmers to adopt improved agricultural practices continue to be relevant in a rapidly changing society? We are entering a new era unlike any we've known before. The rest of the century will bring substantial changes. Change is inevitable, the only question is Extension's response.

We are in a time of accountability. Resources are limited. Extension's mission is being examined and new priorities are being established. Extension is being forced to make decisions it has never had to make before, many of which are difficult and unpopular. Extension has the opportunity to shape its future. Or, it will be forced to react to a future shaped by others.

To anticipate future alternatives, we must understand the present in light of the past. However, there is not even a clear understanding of "what is." In some cases, inaccurate statements are being made about what Extension is doing, and in others, there is an absence of information. So our first research agenda ought to be to define what is. Then we need to use that information to suggest important policy alternatives for the future.

We have been working on an evaluation design that provides a nationwide public assessment of Extension as a total organization.

1 - It is national in scope.

2 - It considers Extension as a total organization.

3 - It is a response of the general public, not from agency generated lists of clients.

4 - And, it integrates multiple data sources.

Extension, like most public service agencies, is increasingly being required to demonstrate its worth in order to continue receiving support. In times of tight budgets, there is increased scrutiny of all agencies and programs. Are programs accomplishing what they set out to do? Are they using the most effective methods? Can they account for the resources utilized? Are the programs reaching the appropriate audiences? These and other questions need to be answered to document that programs are meeting their goals, are utilizing the best possible approaches, and are ultimately, worth their cost.

Evaluations are judgements of worth. But who are the appropriate judges - agency staff, program managers, administrators, policy makers, clientele, or the general public? From whose perspective is the asessment being made? Evaluation results can be expected to differ based on who is doing the evaluating. Our work focuses on the perception of Extension by the general public and independently identified clientele.

Likewise, the nature of evaluations differ depending upon the intended user of the results. Program managers are most interested in the effectiveness of strategies and methods of program delivery. Field staff are concerned with practical issues of program implementation. Policy makers want to know how specific programs impact broader social and economic issues. Some observers see evaluation as a tool for cost analysis or for documenting compliance. And clientele simply want their needs met. In short, evaluation results depend upon who asks and answers the questions and who uses the results.

Historically, evaluation of Extension have tended to concentrate on the separate program areas or on individual projects. They have not attempted to relate the different aspects of the organization as a total system. The

traditional input-output model recognizes inputs, program operations, outputs, and an environmental context. We applied this approach to the Extension organization and came up with a Systems Effectiveness Model for Extension. Inputs are converted into programs and activities that result in various types of outcomes. This model was the conceptual framework that was used to guide our thinking thoughout the study.

Extension is the largest voluntary educational program in the world. With a budget of almost $800 million, it is no wonder many people are raising questions about the organization. On the average, 38% of its resources come from the federal level, 44% from states, and 18% from local government, though this balance varies from county to county and state to state. Extension employs over 17,000 professional staff, two-thirds of which are officed in the over 3,000 counties across the nation. There is an overall ratio of about 2 1/2 county staff to each specialist, but that varies by program area. 4-H has 9 agents/specialist and Home Economics 6, while agriculture and Community Development have about a 1 to 1 ratio. This is somewhat misleading in that 4-H also depends upon specialists in Agriculture, Home Economics and Community Development and Agriculture and Community Development have low ratios for very different reasons. Agriculture has a large number of specialists and agents, while Community Development utilizes specialists but few county staff.

Second, what is the extent of program operations? Extension reaches a lot of people. Staff report over 100 million contacts with clientele per year. The most contacts come from the 4-H program (36%), though it consumes only 27% of the resources (Ag-31%, HE-28%, & CD-6%). In a study of the distribution of staff time in Kentucky, we found that 54% was devoted to individual methods (such as personal visits in offices or in homes), 40% in

group methods (such as meetings, tours, workshops), and 6% on mass media methods such as radio, TV, and newspaper.

Third, what are the organizational impacts? When we look at outputs, we are concerned with the level of awareness of Extension and its programs with the general public, the extent of reported use of the services, the satisfaction or dissatisfaction with the services, and the degree of support for Extension in the future.

Within the environmental context, we are interested in Extension's response to broader changes taking place in society as well as specific changes occurring within the traditional clientele of Extension. Major environmental changes have occurred in Extenion's 70 year history. For example, the farm population has declined from over a third of the population at the turn of the century to under 3%. Rural congressional districts represented over 40% of the seats in the mid-60's and now are less than one-fifth of the total. Things are different now than when Extension began in 1914.

Now let's look at some of the major findings of the national study. Again, the four questions are: Who knows about Extension? Who uses it? How satisfied are clientele? And, do they want support for Extension to continue? A crucial portion of the findings on these four questions comes from a national telephone survey conducted in 1982 of a sample of the U.S. adult population (Warner and Christenson, 1982). The survey resulted in 1,048 respondents, with a response rate of 70%.

Finding Number one. America knows Extension. Overall, 87% of the general public of the U.S. is aware of the Extension name or its programs. 4-H has the greatest visibility with 77% recognizing its name and about half have heard of the other three programs. But only 40% recognized the

organizational name. All program areas have greater recognition than the overall organization.

Eleven million households (or 14% of the total) used Extension in 1981. Twenty-seven percent of the adult population said they used Extension services sometime in their lifetime. There were few differences in use by region of the U.S. although use is slightly higher in the South and the Midwest. Extension serves more middle class, though clientele pretty much mirror the total population. No overt discrimination was reported, but a slightly lower proportion of certain minorities are served than are present in the population. Contrary to popular beliefs, two-thirds of Extension's clientele live in urban areas, 10% on farms, and 23% in rural nonfarm areas. Using county of residence as the criterion, 64% of users live in metro counties and only 36% in nonmetro.

If you try it, you'll like it. Almost all (95%) of Extension clientele are satisfied with the services they receive. When compared with the level of satisfaction with other public service agencies, Extension fairs very well. For example, only 61% of users of employment services were satisfied. Satisfaction is also uniformly high for all four program areas. The lowest was Community Development in which 84% said they were satisfied.

Do citizens want to continue to support Extension? Few people want Extension's support cut. Generally, there is widespread support of Extension. Eighty-two percent want support at least as great as it is now. Few want it to decline (18%) and most want it to stay the same (43%). Satisfied users are more supportive of increased spending than those who are dissatisfied. Forty-two percent of those who are satisfied want increased spending compared with 15% of the dissatisfied. However, the dissatisfied don't want funds cut; they want them to remain the same. And, support can

be found among nontraditional audiences. In fact, the greatest support among users for increased spending on Extension was found among city residents (48), not farm (26) as one might expect.

There is a lot of additional information that can be provided on the organization and its four program areas. For example, the greatest program support is for agriculture and the least for home economics.

But so that we don't merely conduct research for research's sake, let me move to the policy context. I'll try to formulate some of the policy dilemmas I see facing Extension. All of them need additional research. We need more information on each and we need some futurists to help us understand the implications.

Should Extension's mission be broad-based or narrowly defined? The "Extension in the '80's" report argues for a "broad flexible" statement of purpose so that the organization can "remain relevant and respond to the dynamics of change." In contrast, the USDA Users Advisory Board has called for Extension to redirect or eliminate programs and shift personnel so they directly serve the needs of producers of U.S. food and fiber. Which shall it be? Will the organization's mission be stated in terms of general education with specific programs and clientele left undefined, or will it be very specifically defined with the target audience and appropriate subject areas clearly spelled out?

Should staff be generalists or specialists? Over the years, there has been a move toward increased specialization. The ratio of agents to specialists has declined to about 2.5 agents per specialist and county staff have strengthened their expertise in technical areas. However, there is now the realization that county staff must have a broad background and an ability to play an information linkage role for local residents. Naisbitt

concludes in Megatrends that "we are moving from the specialist who is soon obsolete to the generalist who can adapt." Perhaps the specialist - generalist debate should be put to rest. Rather, we should concentrate our attention on identifying the skills needed in the information society. This could lead to entirely new schemes of staffing arrangements.

He who provides the dollars pulls the strings. Program ownership and control is closely related to funding. The federal government has earmarked monies as a mechanism for redirecting programs. Likewise, if state and local governments provide a substantial share of the resources, they want to call the shots. Local officials also have mechanisms for designating use. They often indicate that they will provide funds if it is used for a specific purpose. The three-way partnership in funding support for Extension is extremely fragile. It is unclear whether Extension's shared funding arrangement will be an asset or a liability in times of limited resources. The federal proportion has declined in the past few years, while the states have picked up the slack. What is the appropriate balance in funding and program direction? Federally earmarked monies have meant designated uses, but they have not necessarily jeopardized formula funds. There is also extensive discussion of the federal funding formula at the present time. Key components of the current formula are equity among states, rural population, and farm population. Are these still appropriate criteria?

Will Extension be a leader in the use of emerging communication technologies, or will it be pulled kicking and screaming into the information society? What will Extension's response be to a changing society? As information becomes a more important ingredient, will Extension adjust accordingly? Will computers and new telecommunication methods be

utilized? Or, will Extension continue to rely primarily on personal contacts? Will Extension be an innovator or a laggard?

A multiple or single image, how should Extension be known? Our results show that Extension is known more by its programs than by its organizational name. As a result, it has multiple identities; some know it as an agricultural program, others as homemakers clubs, a youth program or community development. What one finds is a conglomerate of divergent interest groups with very little in common, a situation that makes it difficult to develop a single support group to represent the organization. For example, county programs and materials do not always carry an overall Extension identity. And, identity affects support. Extension's future may depend upon its ability to project a clearly identifiable image.

Who should Extension serve? I sat in the Congressional Oversight Hearings on Extension last year and heard a federal Extension official indicate that 90% of Extension's resources serve rural audiences. But our data show that 2/3 of Extension's clientele are urban residents. Are we accurately representing the nature of the program? Should Extension's programs be directed primarily at rural and farm audiences? Or more basically, should residency be a factor in defining Extension's target audience?

Do Extension programs serve everyone equally? Should they? Overt discrimination was not found in the delivery of Extension programs; however, Extension reaches a lower proportion of Blacks and Hispanics than is present in the total population. A notable exception is the Community Development program, in which a greater proportion of minorities participate. However, covert discrimination may be a more important issue. The nature of programs make them more useful to some persons than others. Subsistance farmers,

single parents, low income youth, and public housing residents may not find Extension information as useful.

What should be the balance between personal and impersonal educational methods? Extension has always relied heavily on personal contacts. Though there has been increased use of mass media methods, the adoption and use of computers, electronic messaging, videotext, and other innovations in telecommunications comes slowly. Extension's ability to respond to clientele needs will depend, to a great extent, upon the organization's own response.

Where is Extension's base of support? There is public consensus that support for Extension should be at least as much as it it now. Few want it reduced. Users are more supportive than nonusers, support increases with frequency of use, and satisfied clients are more supportive. Therefore, support can be increased by making everyone satisfied users. But, support too can be found among nontraditional audiences. For example, urban people. One would expect greatest support among rural and farm residents, but such was not the case.

Who will champion Extension's cause? Extension has relied almost exclusively upon agricultural interests to be its voice in Washington. Some say, as agriculture goes, so goes Extension. As evidenced by the growth in the Extension budget over the years, in the past this strategy has proved to be successful. However, nonagricultural interests have become more prevalent in program offerings, and as our findings indicate, rural and farm residents now comprise a minority of Extension clientele. If the conclusion is that Extension needs to update its organized support base to reflect the present nature of its clientele and programs, the question is, how should it go about developing organized support groups among nontraditional audiences?

Evaluation efforts should consider what is and what ought to be. To date, evaluation efforts have been largely piecemeal and in response to the way winds are blowing at the federal level. Hopefully this study will do two things: (1) It will stimulate people to think of evaluation from the perspective of the total organization, that certain resources are converted into activities that have an impact on people's lives. And secondly, that the intended recipients of programs have an important say in the assessment of its effectiveness. These elements then become information for understanding the present situation, as well as providing the bases for future public policy decisions. There is general agreement that a more comprehensive evaluation system is needed but the true test will be whether evaluation findings begin to influence program directions.

Now I would like to address Extension' response to change as an organization. Although we pride ourselves in our responsiveness to the promotion of new developments in such areas as production agriculture, food technology, and marketing strategies. The way the Extension organization does business has changed very slowly and in small increments over its 70 year history. So much so that the very survival of the organization becomes threatened. Charles Perrow (1970) describes this phenomenon in terms of organizational legitimacy. Legitimization is derived from an organizational's environment--from such groups as clientele, interested citizens, legislators, and taxpayers. They find the outputs of the organization desirable and, therefore, want the organization to continue. Public agencies derive their legitimacy from their social and political environments. Public organizations can be seen "as competing 'politically' for 'institutional legitimacy' in contemporary environments." The product of a public agency, especially one like Extension that deals with education, may

be difficult to identify, thus, leaving legitimization to social agreement and political processes.

The legitimacy of Extension lies in the uniqueness of its informal educational program to help people develop their own potentials. While the clientele of Extension has broadened substantially over the years, there is still a strong tendency to define Extension's base of support as farmers, agricultural commodity groups, homemakers, and rural people. The findings of our study suggest that Extension must develop a legitimacy that is much more broadly based than these traditional rural and farm audiences.

There is a tendency among organizational managers to assume that once legitimacy is conferred, it will always be present; when, in reality, the relationship of the organization with its environment is ever changing. As a result, organizations find, much to their surprise, that the usefulness of their goods and services is questioned; and individuals are seeking to restrict their resources or to withdraw their "protected status." Organizational managers often become preoccupied with matters of internal performance and take the legitimacy of the organization for granted. They then find themselves facing a crisis of legitimacy in that the very existence of the organization is in jeopardy. Whereupon, they rally all of the resources available in an effort to "save the organization." And once the crisis has passed, they again return to focusing upon internal matters and ignore the bases of legitimacy.

In order to establish and maintain organizational legitimacy, we must recognize the grounds of legitimacy, with whom it lies, and the possibility that it is likely to shift over time. Our study begins to examine some of these components. But these issues must be addressed on a state and county level. One thing is clear. In the long run, legitimacy cannot be handled

merely as a reponse to crisis; but it must be a continuous process of communication between the organization and its environment--including not only traditional clientele groups but also funding bodies, political decision makers, and the general public.

The concept of organizational legitimacy is one that Extension has largely ignored. Extenion's philosophy has been that a quality program will sell itself and that it is inappropriate to promote the organization. However, with recent threats to Extension's resource base has come a realization that if the organization is to survive it must address issues of political and social legitimacy. Administrators, as well as field staff, will need to devote more time and energy to understanding the process of establishing and maintaining legitimacy within a changing environment.

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PAPER SESSION 1

NATIONAL STUDY OF EXTENSION'S RESEARCH BASE:
IMPLICATIONS FOR EXTENSION EDUCATION
BY
H. PETER MARSHALL AND ROBERT W. MILLER

LOUISIANA COOPERATIVE EXTENSION SERVICE
HOUSE PROGRAM IMPACT STUDY
BY
CLAUDETTE H. REICHEL AND JON W. KOTRLIK

IMPACT OF A STATEWIDE NUTRITION EDUCATION
EDUCATION PROGRAM AMONG MAINSTREAM AND
LOW-INCOME AUDIENCES
BY
SATISH VERMA, DONNA E. MONTGOMERY AND ELSIE J. CYRUS

NATIONAL STUDY OF EXTENSION'S RESEARCH BASE: IMPLICATIONS FOR EXTENSION EDUCATION

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INTRODUCTION

The Cooperative Extension Service has sought to establish and maintain its viability and credibility as an educational institution by grounding its programs in sound research. More specifically, Extension has strived to utilize its research linkages to extend timely, practical and objective information that could enhance the lives and livelihoods of its clientele. Extension's access to research-based knowledge, therefore, is central to the performance of its educational mission.

The need for a study of Extension's research base was prompted by the establishment of a research committee by the Northeast Extension Directors in 1981. An outgrowth of several meetings of this committee was the submission of a Special Funding Project Proposal to USDA-Extension "... to assess the needs and opportunities to strengthen the base of research underlying Extension programs in the Northeast." During the subsequent project review process, it was determined that it would be more appropriate to approach this issue on a national scale rather than limiting the scope to the Northeast. Accordingly, a revised project proposal was developed with changes in methodology and resource requirements to conduct a national study. This proposal was subsequently funded in May 1982 and the study has recently been completed with the publication of the final report entitled: Strengthening the Research Base for Extension: A National Study of Attitudes and Perceptions. (See References)

PURPOSE AND OBJECTIVES

This paper seeks to analyze the findings of this study as they relate to Extension education. More specifically, it addresses the implications of this study for the education and training of Extension educators.

The overall objectives of this study are as follows:

1. To identify the current and potential role of research in Extension programming.

2. To determine the extent to which needed research for program development exists and is available to Extension.

3. To identify needed new research activities that will provide the content base for Extension programs.

4. To identify research sources either presently being used or available to Extension.

5. To identify opportunities to strengthen Extension's research base.

6. To analyze and report the findings of this study including an assessment of their implications for future policies, programs and initiatives at the regional, state, and federal levels.

PROCEDURES

In fulfillment of these objectives the decision was made to conduct an internal study of Extension with the findings based primarily on the perception of Extension personnel as to the needs and opportunities to strengthen Extension's research base. More specifically, the study was designed to elicit information from a cross-section of Extension personnel as well as selective research providers.

The methodology of the study was undertaken in three distinct phases. The first phase consisted of on-campus interviews with Extension and research personnel at five land-grant universities (Iowa, Maine, Maryland, Oregon, and Texas). The second phase consisted of a nationwide mailed study, with 2,775 respondents to separate questionnaires developed for Extension directors, program leaders, specialists and agents plus Experiment Station directors and academic department heads. (Table 1) The third phase involved USDA interviews with selected USDA-Extension and research personnel.

RESULTS

Major findings of this study as they relate to the education and training of Extension educators include the following:

1. Research utilization is a central part of the work of Extension workers, particularly for Extension specialists. Survey results indicate that certain Extension specialists may be better equipped than others to access and utilize research findings, with academic appointments and educational levels being key factors. An agriculture or natural resources specialist, for

example, is far more likely than a home economics or 4-H specialist to have 1) an academic appointment concurrent with an Extension appointment, 2) a split research-Extension appointment, 3) an office located in an academic department, and 4) an earned doctorate. (See Table 2)

2. The successful performance of Extension's technology transfer programming involves a mix of basic, applied and demonstration research with the availability of applied and demonstration research findings being an area of major concern. More specifically, respondents perceived a growing movement among both university and USDA scientists toward basic research with a corresponding de-emphasis in applied and demonstration research involvement. It is not surprising, therefore, that specialists reported increased involvement in conducting their own applied and demonstration-type research activities seeking the adaptation and application of more basic research findings to their specific programs. (See Table 3)

3. Clientele needs, problems and priorities are often the starting point of Extension programming with Extension personnel subsequently searching for an appropriate research/knowledge base to address these needs. At various times and to varying degrees these needs cut across the social and behavioral sciences, the physical and environmental sciences and the professions. Thus the effectiveness of Extension programming is dependent upon Extension's familiarity with and access to research-based knowledge from diverse sources. (See Chart 1)

4. Extension augments the knowledge base of program clientele with assistance in developing their leadership and decision-making skills. This involves the application of both knowledge and theory related to group dynamics, interpersonal relationships, communication skills, information management, etc. Looking toward the future, computer technology was identified as an essential decision-making tool. Thus expanded Extension programming in this area is anticipated, seeking to enhance the use of computer technology among program clientele.

5. Public affairs programming, which is expected to increase in importance as an Extension activity, involves the integration of subject matter knowledge, such as water, soils, land-use, recreation, etc., with organizational knowledge, such as law, government, policy making, politics, etc. This inherently necessitates multidisciplinary research in an academic setting which is very discipline-based and consequently not conducive to such multi-disciplinary approaches. This was cited as a primary reason for the limited availability of relevant research in support of Extension's public affairs programming.

6. Survey findings indicate that a substantial part of the work of Extension personnel involves the organization and maintanence of Extension programs including their planning, development and evaluation. Several research activities can be identified in support of these activities including needs assessment studies, strategic planning as well as methodological and evaluation research.

7. Judging from the perceptions of Extension directors, program leaders and specialists, Extension's research base generally is adequate to support agriculture programs and generally inadequate for use in community development, home economics and 4-H programs. A majority of the directors considered the research base adequate for natural and environmental resources programs, contrary to the assessments of a majority of the specialists in this area. (See Table 4)

8. A significant finding of this study is that Extension has had a distinctly limited impact on the establishment of research priorities and directions. Extension has tended to interact with research providers on a reactive rather than on a proactive basis by utilizing available research findings without having much influence on the research agenda. Extension tends to operate within the limits of available research, which restricts efforts to conduct programs in areas where research gaps exist.

   These research gaps are most prevalent and therefore most problematic in the community development, home economics/family living and 4-H programs where Extension has fairly limited ties to a research establishment comparable to the Agricultural Experiment Station/USDA research network. Consequently, the greatest needs to strengthen Extension's research base are in these three areas. There are similar opportunities to strengthen Extension's research base for agriculture and natural and environmental resources development programs by seeking greater coordination in the planning and evaluation of research and Extension programs.

   It can be concluded from these findings that one of the principal challenges facing Extension is to anticipate its research needs on a more systematic basis and to initiate a plan of action to obtain needed research. Program directions for the future must be identified in order to anticipate research needs and priorities. In turn, capabilities need to be developed to more methodically analyze, synthesize and disseminate research findings and to search out opportunities to fill research gaps. Extension is challenged to assume a proactive role in identifying its research needs and pursuing research activities that reflect these needs.

RECOMMENDATIONS

Major recommendations of this study as they relate to the education and training of Extension educators include the following:

1. Research utilization should be an integral part of the education and training of Extension educators. This includes a working knowledge of research methods and procedures as well as their application in Extension program development. This is particularly important for Extension specialists whose role is to search out, analyze, synthesize and interpret research-based knowledge in support of Extension programming.

2. The issue of whether Extension personnel should conduct their own research ought to be thoroughly examined. Policies defining the scope, nature and limits of such involvment should be developed. If indicated, specialists and perhaps even agents should receive appropriate research training as an integral part of their education.

3. Steps should be taken to insure that Extension workers are familiar with and have access to research-based knowledge from diverse sources within the land-grant university; within the nation-wide network of land-grant universities; within USDA and other federal agencies; plus within private industry, foundations, associations, state agencies and other sources. Toward this end, training programs for Extension workers should provide educational experiences in searching out and utilizing research findings from sources located both within and outside of the land-grant university/USDA research establishment.

4. A concerted effort should be made to strengthen Extension's use of computers and electronic technology as a vehicle for obtaining timely access to research-based knowledge. This would include expanded training to increase Extension personnel's computer skills and familiarity with potential areas of computer application. In addition, Extension workers should be familiar with the various electronic data base systems as they relate to Extension programming.

5. A concerted effort should be made within each State Extension Service to establish or strengthen their strategic planning capabilities, bringing into focus Extension's research needs on a priority basis--priorities that reflect the most promising opportunities to enhance the lives and livelihood of people served. In turn, these needs should be systematically communicated to the agricultural experiment station and appropriate academic departments seeking increased coordination in the planning and development of Extension and research programs. Extension personnel, accordingly, should receive training related to the methods and procedures of strategic planning.

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TABLE 1

Questionnaire Responses

Category of Response	Response (Number)	Response Rate (in percent)
Extension Directors	57	77
Extension Program Leaders	176	76
Extension Specialists	1338	80
Extension Agents	923	88
Experiment Station Directors	38	66
Academic Department Heads	243	66
Total Respondents	2775	77

Table 2

Selective Characteristics
of Extension Specialists by Program Area

Specialists by	Percentage Response by Program Area				
	Agri-culture	NRD	CRD	Home Economics	4-H
100 percent Extension appointment	56	53	65	88	91
Academic appointment in addition to Extension appointment	69	72	58	41	20
Joint research-Extension appointment	31	29	22	7	4
Office located in academic department	60	60	46	35	12
Participation in academic department rank and tenure system	58	57	48	35	16
Earned doctorate	69	56	56	35	24

Table 3

Specialists With 100 Percent Extension Appointments
Who Report Conducting Various Types
Of Research In Percent

Type of Research	Program Area				
	AG	NRD	CRD	4-H	HE
Basic	8	4	10	6	6
Applied	56	45	56	22	29
Demonstration	68	56	34	28	17
Methodological	15	15	22	32	20
Evaluation	24	24	33	48	43
	(N=241)	(N=111)	(N=125)	(N=190)	(N=275)

Table 4

Overall Assessment of the Adequacy of the Research Base to Support Extension Programming, in Percent

Responding Group*	Degree of Research Base Adequacy				
	Very Adequate	Adequate	Inadequate	Very Inadequate	Not Applicable or No Response
Extension directors/ administrators	--	52	43	--	5
Agricultural program leaders	8	56	26	3	7
Agricultural specialists	7	43	41	5	4
Natural Resource program leader	13	25	56	6	--
Natural resources specialists	4	39	49	8	--
Community resource development program leaders	--	29	66	5	--
Community resource development specialists	6	26	52	15	1
Home economics program leaders	--	10	65	23	2
Home economics specialists	1	26	52	18	3
4-H program leaders	7	17	59	17	--
4-H specialists	1	21	56	18	4

*Data for the natural resources program leaders may not be reliable due to their small numbers.

Chart 1

Academic Departments Cited Most Prevelantly by Specialists, by Program Area, for Making a Research Contribution to Their Extension Work - Departments Which Do Not Correspond to Their Subject Matter Program and/or Are Not Within the College of Agriculture

Academic Departments	Program Areas				
	AG	NRD	CRD	HE	4-H
Biological Sciences	X	X			
Business & Economics	X	X	X	X	
Computer Science	X	X	X	X	X
Education/Adult Education				X	X
Engineering/Environmental Sciences	X	X	X	X	X
Food Sciences/Home Economics	X			NA	X
Health/Physical Education/Recreation				X	X
Human/Family/Child Development				X	X
Performing Arts				X	X
Political Science/Public Administration			X		
Pharmacy/Toxicology	X			X	X
Psychology				X	X
Sociology/Rural Sociology	X	X	X	X	X
Urban Planning/Landscape Architecture		X	X		
Veterinary Science	X				X

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INTRODUCTION

Past Cooperative Extension Service program evaluations were usually informal, fragmented, somewhat lacking in scientific vigor and mainly served program development needs. Today, the era of accountability has produced an increasing need for systematic Extension program evaluation studies which are credible to those making funding decisions. This need is exemplified by the recently adopted Extension Accountability and Evaluation (A/E) System which calls for indepth studies of the impacts of major state programs.

This directive has posed both difficult design problems and exciting opportunities--particularly in terms of Home Economics impact studies, since such programs are usually multifaceted, ongoing, different in every county and have a constantly changing clientele statewide. These factors have made it impossible to aggregate the statewide "impact" of Louisiana Cooperative Extension Service (LCES) efforts from bits and pieces of unrelated information collected from county reports of diverse activities. The following impact study design addresses these problems while attempting to provide credible evidence of statewide impact (economic and social consequences) within the constraints of fiscal and practical feasibility.

Design Rationale

Design is a core consideration in choosing methodology, influenced by the intentions, procedures, timing and budget for the study (Rivera, Bennett and Walker, 1983). The primary intent of an impact study is to determine the levels of economic, social, environmental and individual consequences (results) of program-induced learning. But, because direct measures of program impact are difficult to obtain, it has been suggested that utilization (e.g. practice adoption) be used as indirect or "proxy" indicators of impact (Rivera et al., 1983; Wholey et al., 1970). The study design evolved from the decision to primarily measure practice adoption as a high level indicator of ultimate consequences.

Rogers' (1963) adoption and diffusion theory contends that program evaluations concerned with the prevalence and level of adoption should

not immediately follow a program but allow sufficient time for later adopters to complete the process. Since premature evaluations appear likely to inaccurately show few and small scale adoptions (by the first innovators), impact studies should be longitudinal.

Additionally, in order to determine the extent to which specified behavioral or status changes of participants are attributable to an Extension program, it is important that alternate (rival) explanations of these changes be eliminated or taken into account (Rivera et al., 1983). Between-group designs which make comparisons between two or more groups can provide stronger evidence that clientele changes are results of program participation, rather than rival explanations (Campbell and Stanley, 1966).

PURPOSE AND OBJECTIVES

The purpose of this impact study was to determine the difference in adoption levels of housing practices between the LCES housing program audience and the general public. Objectives for the study were as follows:

1. Determine the housing practices (adoption levels) of the LCES housing audience and the general public.

2. Determine if significant differences exist between the adoption levels of the LCES housing program audience and the general public.

3. Estimate the dollar value of savings realized by the LCES housing audience over the general public, if savings exist.

PROCEDURES

Study Design

Since it is not feasible to pre-test and post-test the same individuals in a statewide program impact study, a comparison group research design was selected as the most informative yet feasible alternative. It enabled assessments of the differences in adoption levels between the Extension audience and the general public.

In addition, a repeat of this study is planned for 1988 to obtain measurements of the change in adoption levels over time due to Extension programs.

Study Coordination

Since the LCES Housing, House Furnishings and Nutrition programs follow the same planning cycle, their impact studies were conducted concurrently. Therefore, the specialists coordinated procedures to minimize confusion and workload among parish Extension agents.

Instrumentation

Two almost identical interview schedules were developed for this study--one for the LCES housing audience and one for the general public. The differences between the instruments were: (1) a series of five questions asked of the general public to determine their level of prior participation in Extension programs (and to disqualify those who had participated in Extension housing programs) and (2) questions asked of the Extension audience to determine the type of participation (if any) in each specific housing program topic.

The items in the interview schedules were derived from the objectives of the LCES housing program of work. After the interview schedules were developed, they were field tested and revised based on the field test findings.

Populations

The "audience" (test) population consisted of all Louisiana homeowners who had participated in at least one Extension housing program during the previous three years (by means of direct contact or written materials).

The "general public" (comparison) population consisted of all Louisiana homeowners who had never participated in Extension Home Economics housing programs.

Sample Size

The necessary sample sizes were calculated using the formula specified in Tables for Determining Sample Size and Sample Error of the National Research Foundation. The minimum required sample size for the comparison population was 384, based upon the number of households in the state according to 1980 Census data. The minimum sample size for the Extension audience was 379, based upon the estimate that the housing audience was comprised of 30,000 or fewer.

As a result of the random selection of parishes and the varying number of agents in each parish, a sample of 435 was selected from each population (see Sampling Techniques). The final number of usable Extension audience interview schedules was 424. The final number of usable general public interview schedules was 392.

Sampling Techniques

A stratified random area sampling procedure was utilized whereas the drawn sample number was divided equivalently among the number of applicable agents in 21 (out of 64) randomly assigned parishes. The reasons for this procedure are: (1) based upon the assumption that the size of the Extension audience in a given parish and the educational impact upon them is roughly proportional to the number of agents in such parish; and, (2) to preserve validity relative to interviewer (agent) performance by evenly distributing, thus minimizing, the interviewing

load among all agents and requiring that each agent be concerned with only one subject matter.

The comparison sample selection was controlled for sex and geographic location (home town) of residence to match these characteristics of the test samples which are assumed to be important to the comparability of the test and comparison groups.

The sequence and details of the sampling procedure are as follows:

1. One-third of the state's parishes were randomly drawn for each subject matter--Housing, Furnishings and Nutrition.

2. The number of applicable agents (See Data Collection Technique) were determined for each parish. The number of agents in each parish was multiplied by 15 for the total sample size for each parish. This produced a statewide sample size of 435 based upon a total of 29 agents.

3. Lists of the parish Extension housing audience populations (names, phone numbers and home towns) were secured from each applicable agent.

4. A table of random numbers was used to draw the test samples and an equal number of alternates from each parish.

5. The comparison samples were drawn from the telephone directories of the same towns as the test samples. The proportion of comparison sample and alternate members from each town were matched with that of the test sample. Two alternates were selected for each comparison sample member, anticipating a greater difficulty in securing willing and qualified respondents than for the Extension audience sample. In a few instances, it was necessary to draw additional alternates to obtain the required number of complete interviews.

6. A table of random numbers was used to select the page number, then the name on each selected page of each telephone directory.

7. The complete lists of names, phone numbers, and home towns were provided the interviewers (agents) with the interview schedules when data collection was to commence.

8. Alternates were substituted for primary sample members when: respondents did not fit the defined population characteristics; comparison group respondents did not match the sex ratio of the test sample (likely to be female); and, sample members could not be reached after three attempts at different times of the day.

Data Collection Technique

Data was collected from the samples by means of telephone interviews conducted by the Extension Home Economists who work with adult audiences (excluding "Expanded Foods and Nutrition Extension Program" agents and "1890" agents) in each selected parish. These agents received packets of instructions on how to administer the survey and conduct telephone interviews.

Treatment and Analysis of Data

Two approaches to data analysis were used. One examined the overall impact of past Extension programs upon the entire LCES housing audience sample. This approach estimates diffusion levels of statewide program thrusts and enables extrapolation to the entire LCES housing audience population.

The second approach examined the impact upon the segment of the LCES housing audience sample who had "received help or information from the Extension Service" in each specific topic included in the study. This enabled an assessment of the direct impact of various educational efforts upon the educational recipients.

To facilitate statistical analysis and inter-group comparisons, a weighted point system was developed to convert and summate related question responses into a single "topic score". In other words, points are accumulated for each practice adopted within a topic. The sum of these points represent the respondent's adoption level "score" for that topic.

The point system was developed by the Extension Housing specialist prior to data collection. A panel of three housing education experts reviewed and modified the point system until a consensus was reached.

The overall impact of LCES programs prior to data collection was estimated by determining the differences between the practices of the entire LCES housing audience and the general public. The t-test and chi-square test were used. The alpha level was set at .05 for all statistical tests.

This analysis does not account for the possibility that different adoption levels between the two groups may be partly due to the type of people who comprise the Extension audience rather than to the Extension programs per se. Nevertheless, such an analysis may be the only way to assess past thrust topics and ongoing programs where there is insufficient "pre-program" audience data.

RESULTS

Impact of Past LCES Programs Upon the Entire LCES Housing Audience Sample (Divided into Three Major Program Objective Categories)

Home Planning and Selection

A significantly greater proportion of the LCES housing audience adopted pre-purchase home inspection practices than did the general public, including inspection of the roof (77 percent vs. 66 percent), land drainage (73 vs. 57 percent) and HVAC systems (73 vs. 62 percent). There was not an overall significant difference between the two groups in the areas of space-efficient design, cost-cutting construction techniques, contractual/remodeling precautions and kitchen design.

Home Maintenance and Repair

Based on the findings of the study, it was projected that the LCES housing audience population (approximately 6,700) completed 34,900 home repairs (screening, window glass, electrical, wall, toilet, faucet interior painting, exterior mildew removal) in the last three years (averaging 5.24 per respondent). This is 21 percent more than for the general public (4.34 per respondent).

The estimated LCES housing audience population savings was $1,608,900 ($240/family), 26 percent more than for the general public ($192/family). Therefore, the total three-year savings above the status quo (general public) was projected to be $335,000 ($50/family). The total number of repairs above the status quo was projected to be 5,800.

A significantly greater proportion of the LCES housing audience adopted two key home maintenance inspection practices than did the general public, including having the air conditioner inspected (79 percent vs. 72 percent) and inspection of the water heater (70 vs. 61 percent). Differences were not significant at the .05 level for: inspection of the land drainage (62 vs. 55 percent), attic inspection (56 vs. 50 percent) and chimney inspection (50 vs. 39 percent).

Energy Efficient Design

A significantly greater proportion of the LCES housing audience had adopted the following energy-saving techniques than did the general public: R-value of ceiling insulation is 19 or higher (27 percent vs. 15 percent), built-in air infiltration barriers (25 vs. 16 percent), overhang or awning on the south side (50 vs. 36 percent), high efficiency heating or cooling equipment (52 vs. 41 percent) and ridge vents (37 vs. 28 percent). There was not a significant difference between the two groups in their use of solar screens or film on the west windows and double-pane or storm windows.

Based upon highest 1983 summer utility bills and the mean house size (square feet), the LCES housing audience's energy bill per square foot of home size was 8.41 cents, 13.4 percent lower than that of the general public (9.71 cents/sq. ft.). The LCES housing audience's consumption reduction was estimated to be approximately 1500 kwh/family, totaling a projected 10.15 million kwh saved in 1983. At an average utility rate of 7.2 cents/kwh, the savings amounts to $109 per family. Using these figures, it was estimated that the LCES housing population realized savings of over $730,000 in 1983.

<u>Comparison of Adoption Level Scores of the LCES Housing Topic Audience (the segment of the LCES housing audience sample who received Extension help or information on the respective topic) with Scores of the General Public.</u>

1. There was a significant difference between the mean scores of the LCES housing topic audience and the general public in their adoption levels of home selection practices. This included pre-purchase inspection practices and home suitability.

2. There was a significant difference between the two groups in their perceived levels of understanding of home finance.

3. There was not a significant difference between the two groups in the space-efficiency of their homes. This included multi-purpose spaces, no seldom used rooms, minimal hall space and adequate storage.

4. There was a significant difference in the energy efficient design and features of the homes of the two groups. This included window placement, high EER air conditioning, insulated windows, west side shading devices, air-infiltration barriers, ridge vent and adequate R-value of insulation.

5. There was a significant difference in the consumer precautions used when hiring and paying a contractor. This included contractual specifications of a guaranteed maximum price, final payment withholding until after job completion and inspection, and receipt of lien waivers before making payments.

6. There was a significant difference in the use of cost-cutting construction techniques in custom built homes. This included modular planning and "any other special cost-cutting techniques".

7. There was a significant difference in the consideration of cost vs. value before remodeling.

8. There was a significant difference in the adequacy of their kitchens. This included no major traffic through the work triangle and adequate electrical outlets, mix center area and convenient storage space.

9. There was a significant difference in recent home maintenance inspections conducted, including: the attic, chimney, water heater, air conditioner and drainage.

The data are presented in Table 1.

Insert Table 1 about here

CONCLUSIONS/RECOMMENDATIONS

The results are consistent with LCES housing program thrusts over the past eight years. The greatest emphasis has been in home maintenance and weatherization which are the areas which show more educational impact and statewide diffusion.

Also, those segments of the total audience sample who "received help or information" in other topics showed high levels of adoption in most instances. This indicates that LCES housing education efforts were effective in bringing about change (adoption) in Extension audiences.

It is recommended that this study be replicated in 1988 to substantiate that program "successes" are in fact attributable to Extension (by using this study's data as a benchmark for pre-program/post-program comparisons) and to determine diffusion levels of the new 1984-88 housing thrust areas of home selection and planning.

Benefits of This Study Design

While this study design is time consuming, it secured an adequate sample size and minimized sample bias (preserved randomness to a much greater extent than with mail out questionnaires) for statistical defensibility. In other words, it provided meaningful data.

For the first time, the Home Economics programs which utilized the comparison group design for their impact studies have direct statewide feedback from and about their target populations--including not only the beneficiaries of past educational efforts, but also the unreached public at large.

This research design provided credible evidence of total statewide program results for Federal and state administrators, policy makers, legislators and tax-payers.

These studies were also very useful to Extension personnel as a major internal, statewide evaluation. The Louisiana Extension Home Economists, state specialists and District Agents are using the results to analyze the effectiveness of past teaching methods, reexamine teaching objectives and redirect their program thrusts.

According to Lasley and Padgitt (1983), internally conducted program evaluations offer greater potential for both the professional development of staff and improvement of Extension programs. They believe staff involvement fosters communication (idea sharing), motivation to analyze program successes and failures, commitment to long-range planning and receptivity to findings.

Costs

No special funds were allocated for the 1984 impact studies. The studies were implemented within the preexisting operating budget and body of personnel. The only cash outlays consisted of long distance telephone costs incurred by approximately one third of the parishes (estimated to average $50 per parish). The paper and mailing costs were an estimated $15 per parish. However, substantial staff time was required (approximately 30 hours per agent, clerical time for typing and duplication and weeks of specialists' time over a period of six months for initial planning, development, implementation, analysis and reporting).

It is recommended that funds be allocated on the state level to cover the parish's long distance telephone costs, since a few parishes experienced budgetary shortages during the month of data collection.

Logistical Problems

Most of the logistical problems stemmed from the demands of conducting three such studies concurrently and from time constraints. Conducting three studies tripled the interviewing load per agent and posed telephone budget problems for a few geographically large parishes. Also, the newness of the planning cycle did not allow sufficient time to provide active skills training in conducting telephone interviews, resulting in some disqualified interview schedules and greater time expenditures by both the agents and specialists.

Most agents had a little difficulty completing the "general public" interviews. In general, they were more difficult to reach by phone during the daytime and more suspicious or impatient about being interviewed than were the Extension Audience.

It is recommended that interviewers receive active inservice training in conducting telephone interviews and that future studies be shortened to focus on the current four-year thrust topics only. In this case, the housing and furnishings studies could be combined and the total interviewing load of each agent would be reduced by one-third. In addition, shorter interview schedules would be likely to reduce the incidence of incomplete interviews.

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Table 1.

Adoption Score Comparisons Between Topic Audiences and General Public

	POSSIBLE SCORE	TOPIC AUDIENCE n	TOPIC AUDIENCE mean score	GENERAL PUBLIC n	GENERAL PUBLIC mean score	T-VALUE
1. home selection	20	84	17.36	389	12.94	5.95***
2. home finance	5	53	4.36	378	1.80	9.35****
3. space-efficiency	30	221	16.03	390	16.54	1.02
4. energy-efficiency	40	212	14.79	390	10.79	6.05****
5. contractual precautions	15	49	10.82	70	7.93	2.71**
6. cost-cutting construction	10	88	4.84	189	2.67	4.49****
7. remodeling	5	73	2.77	136	2.13	2.14*
8. kitchen	15	93	11.35	367	9.48	4.05****
9. home inspection	25	207	14.42	261	11.34	4.37****

* p<.05, ** p<.01, *** p<.001, **** p<.0001

IMPACT OF A STATEWIDE FOOD AND NUTRITION EDUCATION PROGRAM AMONG MAINSTREAM AND LOW-INCOME AUDIENCES

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INTRODUCTION

Program Audiences

The food and nutrition education program of the Louisiana Cooperative Extension Service is aimed at improving understanding and appreciation of foods and nutrition principles and practices for better health. The program is a joint effort between two state land grant colleges, Louisiana State University (the 1862 institution), and Southern University (the 1890 institution), which, typically, serve mainstream and low-income audiences, respectively.

The mainstream audience consists primarily of middle-class families, and represents the traditional, long-standing clientele served by Extension. Low-income families have not figured prominently in mainstream Extension audiences and the Expanded Food and Nutrition Education Program (EFNEP) was instituted to meet this need. More specifically, the 1890 program in Louisiana, as in the other southern states with similar institutions, is focused principally on the low-income segment of the population. It was formally established in 1972 and covers 16 counties.

Program Content

From the standpoint of program content, the educational programs of the two institutions are essentially similar and cover food buying, food preparation and food consumption practices. Obviously, disposable personal income (DPI) available to low-income families is considerably less than for middle-income families; consequently, a larger proportion of their DPI goes for food and, therefore, food buying and food preparation strategies that provide maximum nutritional return for the money spent have been emphasized.

Nationally, 15.9 percent of DPI was spent by Americans on food in 1983 - 11.4 percent on food at home, and 4.5 percent for food away from home. (National Food Review, Winter 1984). A 1979 report indicated that lowest income families spent as much as 35 percent of income on food, and lower middle-income families 22 percent. In absolute dollars, though, no significant difference was reported in the money spent by the lowest and highest income families on food eaten at home. (National Food Review, Summer 1980) It is also reported that nearly one out of every ten Americans received food stamps in 1983, and, as a result, increased their food expenditures and improved nutritional status (National Food Review, Spring 1984). In Louisiana, 15 percent of the population was receiving food stamps in 1984. With regard to nutrient consumption, it has been reported that 20 percent of all low-income households in a national study consumed food that furnished nutrients less than the recommended daily allowances for vitamin A, vitamin B_6, calcium, magnesium and food energy (Economic Research Service, 1983). It is evident, therefore, that the problem of optimizing nutritional returns from the money spent on food is considerably greater for low-income families, and requires appropriate emphasis.

Program Outcomes

Behavior changes aimed at the educational programs of both institutions are mainly in the cognitive domain - understanding of concepts and principles which is then translated into adopted practices. Generally, evidence of adoption presumes that underlying beliefs and attitudes are favorable, although this may not be the case. Compatibility of practice - belief structures is to be desired for relatively permanent and non-regressive behavior change. Therefore, educational programs need to consider both cognitive and affective aspects of behavior, and structure learning experiences that are appropriate for these types of behavioral objectives.

Program Evaluation

Evaluation of Extension work in Louisiana has been focused in the past on county programs and the audiences served by the Cooperative Extension Service. The current evaluation/accountability concerns have injected into evaluation planning the idea of statewide evaluation and reporting of major programs. To the extent feasible, there is an appeal for such evaluations to be problem-specific so that in-depth assessments can be made of change efforts and/or social and economic consequences. There is in this an apparent paradox for evaluation design to simultaneously look for both breadth (statewide major program) and depth (problem-or content- specific aspects of major programs). The position adopted by the Louisiana Cooperative Extension Service has been to do statewide evaluations focused on the total program, and where feasible or needed, supplement these with in depth assessments of specific aspects of major programs. The evaluation represented in this paper follows this stance and serves as a benchmark of the statewide food and nutrition education program. It also provides an indication of the impact of this program because it compares the nutrition behavior of audiences served and not served by the Extension Service.

PURPOSE AND OBJECTIVES

The purpose of this study was to find an answer to the question: Has the Louisiana Food and Nutrition Education Program made a difference in the nutrition and health behavior of Extension audiences?

The specific objectives were to determine if the mainstream audience served by the 1862 institution and the low-income audience served by the 1890 institution showed greater understanding and application of nutrition and health-related principles and practices as a result of participation in the Extension program as compared to their respective counterparts that have not been served by the two institutions.

PROCEDURES

Sampling procedures followed by the 1862 and 1890 institutions were different because the 1862 phase of the study used telephone surveys to gather the information and the 1890 phase utilized personal interviews. Survey instruments and analytical procedures were identical.

Sampling

For the 1862 phase of the study, the 64 counties in the state were grouped according to population size - under 20,000, 20,000 to 35,000, 35,001 to 75,000, and over 75,000. A proportionate sample from 23 counties (slightly over one-third of the total counties) was drawn from the four groups by the Nutrition Specialist heading the study. Twenty-six home

economists doing adult work in the sample counties were mailed instructions on how to draw a random list sample, and how to sample the Extension audience and the non-Extension audience. Nutrition mailing lists of program recipients for the period January 1, 1983 to April 1, 1984 were used for the Extension sample, and county telephone directories were utilized for the non-Extension sample. Fifteen respondents from each of the two groups were to be surveyed by each home economist. Provision was made for primary and alternate respondents. The final count of respondents surveyed was 392 in the Extension sample and 378 in the non-Extension sample. A sample size of 372 was considered optimum for the state's household population, with a 5 percent margin of error at the 95% confidence level (Portman, et al, 1975).

For the 1890 phase of the study, Extension home economists in the 16 counties of the 1890 program used the county nutrition program enrollee lists to draw a random sample of 10 names per county to make the Extension sample.

Neighborhoods in which the selected Extension respondents lived were used to draw the non-Extension sample; also, 10 per county. The number of respondents selected in a neighborhood was the same for both samples. As the home economist conducted personal interviews in the several neighborhoods with Extension respondents, she obtained at random the non-Extension respondents. The final count of respondents was 166 in the Extension group and 163 in the non-Extension group.

Collection and Analysis of Data

Two major sets of data were included in the survey instruments, (a) food buying, preparation and consumption practices, (b) nutrition and health beliefs. Adoption frequency of 19 items in the first set was measured on four- or three-point Likert-type performance scales, and beliefs about 13 nutrition and health practices in the second set were evaluated on a four-point agreement/disagreement scale.All items, whether stated as recommended or non-recommended practices and appropriate or inappropriate beliefs were positively scored from 0 to 3, or 0 to 2.

One-way analysis of variance was used to test for statistically significant differences in the nutrition behavior (practices and beliefs) of Extension and non-Extension audiences for both institutions. Significance levels used were .01 and .05. The mean performance and belief scores were also qualitatively analyzed to make judgements about desirable levels of behavior.

The extent to which Extension homemakers served selected foods to their families was also determined to see whether or not the right kinds of food were being consumed, and how often this was being done. No statistical analysis was done because quantitative measures of consumption were not obtained.

RESULTS

The findings of the study are presented in three tables to show (a) performance of food buying, preparation and consumption practices (Table I), (b) nutrition and health beliefs (Table II), and (c) consumption frequency of selected foods (Table III). For each institution, (1862 and 1890), data are presented for the two audiences (Extension and non-Extension) as means of performance and belief . Statistical significance observed at the .01 and .05 levels is also shown. The consumption levels of selected foods are presented for the Extension audiences of both institutions, without any statistical analysis.

Food Buying, Preparation and Consumption Practices

The data in Table I for the 1862 institution show that the Extension audience out-performed the non-Extension audience in 10 of the 19 practices wherever statistically significant differences were observed. The Extension audience more often than the non-Extension audiences read newspaper food advertisements, planned meals around specials, shopped with a list, bought no caffeine foods, ate breakfast, snacked on fruits and vegetables and exercised actively. They also were less prone to salt food while cooking or add salt at the dinner table, and to eat fried foods than the non-Extension audience.

In the 1890 program, the two groups were at the same level in all but three practices, in which the Extension group did better. The differences in eating breakfast and eating fruits and vegetables for snacks were statistically significant. In addition, the Extension group was more prone to eat away from home.

From a qualitative standpoint, scores in the range of 2.00 to 3.00 signified fair to high performance of the food buying and food preparation practices; scores less than 2.00 indicated unsatisfactory performance. For food consumption practices, scores below 1.00 were considered as unsatisfactory.

Using these norms, both the 1862 and 1890 Extension and non-Extension audiences fell below satisfactory performance levels on five food buying practices. They did not buy low-calorie, no-caffeine and low-sodium foods often enough, nor plan meals around specials. The 1862 audiences also fell short on food budgeting, and the 1890 audiences on unit food pricing.

With regard to food preparation and consumption both institutions' audiences were preparing food with lard or bacon grease and salting food while cooking to a greater extent than was desirable. In addition, 1890 audiences were salting food at the table, and eating fried foods at higher than desirable levels.

Audiences of both institutions were not exercising as often as they should.

TABLE I

A Comparison of the Performance of Food Buying, Preparation and Consumption Practices of Extension and Non-Extension Audiences of 1862 and 1890 Louisiana Cooperative Extension Institutions

Practices	Type of Audience					
	1862 Institution			1890 Institution		
	(Mean Performance Scores)					
	Ext. (n=392)	Non-Ext. (n=378)	F	Ext. (n=166)	Non-Ext. (n=163)	F
Food Buying (Max score = 3.00)						
Budget for food	1.73	1.71	.07	2.26	2.33	.39
Read newspaper food ads	2.37	2.20	5.91**	2.24	2.25	.01
Plan meals around specials	1.60	1.43	4.41*	1.63	1.67	.07
Shop with list	2.59	2.35	14.22**	2.25	2.19	.24
Use unit pricing	2.07	1.97	1.87	1.91	1.91	.00
Buy low-calorie foods	1.34	1.25	1.24	1.13	1.20	.42
Buy no-caffeine foods	1.40	1.23	4.35*	1.27	1.24	.08
Buy low-sodium foods	1.24	1.11	2.63	1.25	1.79	.31
Food Preparation (Max score = 3.00)						
Salt food when cooking(a)	.86	.68	6.31**	.57	.63	.35
Salt food at table(a)	2.07	1.78	13.44**	1.92	1.82	.68
Prepare food with lard or bacon grease(a)	1.99	1.92	.85	1.63	1.66	.05
Prepare foods with oil or margarine	2.39	2.38	.08	2.35	2.24	2.25
Prepare meals at home	2.78	2.64	.19	2.61	2.66	.61
Try weight-less diets(a)	2.51	2.45	.78	2.40	2.25	1.96
Food Consumption (Max score = 1.00)						
Eat breakfast	1.58	1.29	25.23**	1.40	1.20	4.42*
Eat fruits and vegetables for snacks	1.47	1.32	8.45**	1.47	1.27	5.36*
Eat fried foods(a)	1.36	1.13	17.73**	.91	.88	.08
Eat away from home	1.45	1.48	.50	1.65	1.32	20.60**
Active exercise (15-30 minutes per day)	.97	.82	6.05**	.61	.62	.01

(a) Not preferred practices; higher scores indicate lower performance, therefore desirable.

Nutrition and Health Beliefs

The data in Table II for the 1862 institution indicate that the nutrition and health beliefs of the Extension audience were consistently more appropriate than those of the non-Extension audience. This showed up in eight cases where statistically significant higher belief scores were observed for the Extension audience. They believed to a greater extent than the non-Extension audience that it was good to eat three meals a day, and to eat fewer sweets and high-fat foods and more high fiber foods, to cut down on salt and to exercise regularly. They also believed that adults should drink milk and that pregnant women should drink a quart of milk a day.

In contrast to the 1862 program, there was greater homogeneity in the nutrition and health beliefs of the 1890 program audiences. Only in three cases was a statistically significant difference observed. And, in two cases, the Extension audience held more inappropriate beliefs than the non-Extension audience. While they realized that special products did not have much nutritional value, they were less convinced about the need to eat less high-fat foods and the fact that women needed to gain at least 20 pounds during pregnancy.

Qualitatively, belief scores of 2.00 to 3.00 signified appropriate behavior; scores below 2.00 meant inappropriate behavior. Extension and non-Extension audiences of both institutions were found to be lacking in their convictions about the nutritional needs of pregnant women, the need to provide infants with solid food before six months of age and the ineffectiveness of low-carbohydrate or high-protein diets to lose weight. In addition, 1890 audiences did not feel strongly about the ineffectiveness of high potency vitamins and minerals.

Consumption Frequency of Selected Foods

The extent to which the Extension audiences of 1862 and 1890 institutions consumed selected foods, and the serving frequency of these foods in three time periods - day, week and month - is shown in Table III.

Fruits and vegetables, eggs, margarine and cheese were being consumed by over 90 percent of both 1862 and 1890 audiences. More of the 1862 audience served low-fat or skim milk, low sodium or salt-free foods and candy than the 1890 audience. Conversely, more of the 1890 audience served whole milk and butter.

Considering frequency of serving, no uniform pattern was observed. Cost, dietary habits and food preferences play a part in consumption patterns. For example, low fat or skim milk costs about the same as whole milk, and cheese is relatively expensive. Consequently, a smaller percentage of the 1890 audiences consumed these foods daily than did the 1862 audience. Similarly, smaller percentages of the 1890 audience had fruits and vegetables daily. On the other hand, more of them had eggs and margarine - relatively less expensive foods - on a daily basis.

TABLE II

A Comparison of Nutrition and Health Beliefs of Extension and Non-Extension Audiences of 1862 and 1890 Louisiana Cooperative Extension Institutions

Practices	Type of Audience					
	1862 Institution			1890 Institution		
	(Mean Performance Scores) (a)					
	Ext. (n=392)	Non-Ext. (n=378)	F	Ext. (n=166)	Non-Ext. (n=163)	F
Taking super-strength vitamins, minerals or large doses of regular-strength vitamins/minerals	2.09	2.15	.44	1.97	1.94	.08
Eating three meals a day	2.43	2.16	25.58**	2.47	2.37	1.42
Adults should drink milk	2.20	2.07	5.72**	2.30	2.26	.24
Eating fewer sweets	2.38	2.28	3.78*	2.22	2.28	.44
Exercising regularly	2.43	2.31	8.41**	2.36	2.39	.19
Using special products (lecithin, protein supplements, diet pills, bee pollen)	2.43	2.36	1.40	2.46	2.24	6.05**
Feeding solid foods to infants before 6 months age	1.61	1.62	.01	1.74	1.52	3.40
Cutting down on salt	2.43	2.22	23.02**	2.34	2.35	.01
Eating fewer high-fat foods	2.39	2.24	10.31**	2.02	2.26	7.47**
Eating more high-fiber foods	2.44	2.21	24.94**	2.16	2.19	.11
Using low-carbohydrate or high-protein diet to lose weight	1.85	1.80	.42	1.73	1.64	.63
Gaining at least 20 pounds during pregnancy	1.49	1.47	.08	1.23	1.45	3.97*
Drinking a quart of milk a day during pregnancy	1.84	1.69	5.08*	1.90	1.94	.18

(a) Maximum score = 3.00.

TABLE III

A Comparison of the Average Number of Times
Selected Foods were Served to their Families
By Extension Audiences of
Louisiana Cooperative Extension Institutions

Food Item	Institution	Number Serving	% of Total	Percent by Frequency of Serving: 1 or 2 times per day	2 or 3 times per week	1 or 2 times per month
Whole Milk	1862	248	63	77	19	4
	1890	143	86	76	23	1
Low fat/skim milk	1862	221	56	73	20	7
	1890	72	43	38	43	19
Cheese	1862	369	94	24	68	6
	1890	150	90	13	65	22
Butter	1862	146	37	34	40	26
	1890	124	75	40	36	24
Margarine	1862	363	93	81	18	3
	1890	138	83	54	41	5
Eggs	1862	369	94	27	66	7
	1890	160	96	46	49	5
Fruits and Juices	1862	383	98	62	33	5
	1890	156	94	47	47	6
Fresh, frozen, canned Vegetables	1862	381	97	36	56	8
	1890	157	95	22	64	12
Low-sodium, salt-free Foods	1862	179	46	51	34	15
	1890	65	39	37	43	20
Candy	1862	288	73	21	51	28
	1890	111	67	21	56	23

CONCLUSIONS

The 1862 Extension Foods and Nutrition program has had an impact on nutrition and health behavior of its audience as evidenced by the fact that in more than half the food buying, preparation and consumption practices, homemakers were practicing recommendations more often than the non-Extension audience. The same could not be said of the 1890 program because only in two instances did the Extension audience do better. This lack of difference could be attributed to the ripple effect of Extension work in close-knit neighborhoods, combined with a more traditional and economically constrained segment of the population.

Inconsistencies between nutrition beliefs professed and consumption practices followed were observed. For example, the highly regarded belief in three meals a day was counteracted by nearly one-third skipping breakfast; that adults should drink milk compared with less than one-half serving milk and milk products daily; that fewer sweets should be eaten compared with nearly one-third serving candy daily/twice a week; that fewer high-fat foods be consumed compared with more than one-third serving butter daily; that one should exercise actively compared with a low percentage exercising daily; and that more high-fiber foods should be consumed compared with only 40 percent taking fruits and vegetables daily.

Future programs should emphasize educational work in topics that revealed low qualitative scores, namely food budgeting, shopping for specials, buying low-calorie, low-sodium, and no-caffeine foods, salting food only while cooking, preparing food without lard or bacon grease, daily exercise, cutting down on fry foods, weight-fad diets, and pregnancy and infant care needs. Work on the knowledge aspect of human behavior should be complemented with programs to promote beliefs that will strengthen practice adoption and facilitate integrated behavior change.

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A CRITIQUE OF SELECTED RESEARCH

IMPACT OF STATEWIDE FOOD AND NUTRITION EDUCATION PROGRAM AMONG MAINSTREAM AND LOW-INCOME AUDIENCES

LOUISIANA COOPERATIVE EXTENSION SERVICE HOUSING PROGRAM IMPACT STUDY

NATIONAL STUDY OF EXTENSION'S RESEARCH BASE: IMPLICATIONS FOR EXTENSION EDUCATION

BY

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A CRITIQUE OF SELECTED RESEARCH

Accountability/Evaluation (A/E) are two words that are receiving a great deal of attention within the Cooperative Extension Service. As a result of the implementation of the A/E System in 1982, the Cooperative Extension Service has re-examined its commitment to the areas of evaluation and accountability. New and stronger emphases to address these issues are now being promoted and implemented throughout the states. These new requirements can be and many times are frustrating to those employees who are charged with implementing efforts to accommodate these new rules and regulations. State Extension Services have found themselves faced with having to conduct four to six state impact studies over a four-year period of time without staff capabilities to meet these demands. Resources are being reallocated and individuals with research/evaluation skills are being sought to provide leadership and direction to state Extension services as they strengthen their evaluation and accountability efforts. Extension personnel must become skilled in evaluation for the purpose of program management and accountability. I compliment the research teams for their efforts, abilities, and commitment to the areas of evaluation/accountability.

IMPACT OF A STATEWIDE FOOD AND NUTRITION EDUCATION PROGRAM AMONG MAINSTREAM AND LOW INCOME AUDIENCES

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Elsi J. Cyrus

Danny L. Cheatham

This study certainly addresses an important area. It deals with a long standing program of CES and one that has in most cases been successful in generating impact results. I commend the researchers for selecting this program area for conducting an impact study.

INTRODUCTION

The researchers should be complimented for providing background information on the food and nutrition program in Louisiana. Their identification of program audiences, program content, program outcomes, and program evaluation help give the reader an overview of the program and provides an adequate rational for conducting the study.

Both 1862 and 1890 programs are involved in the study, thus providing a comprehensive analysis of the program area. However, it appears that the 1890 program is confined to sixteen counties. Therefore, 1862 programs (23 counties) are also concerned with meeting

the needs of low income audiences. From a practical point of view, there is probably overlap between the two programs and joint planning of the design of the study and conducting of research efforts could have been improved.

PURPOSE AND OBJECTIVE

The purpose of the study was to determine if there were any differences between Extension audiences and non-Extension audiences in their nutrition and health behavior. Both 1862 and 1890 programs were reviewed. At least, that is what appeared to be the purpose of the study. However, more emphasis in the latter part of the paper is placed on the difference between the 1862 and 1890 food and nutrition program, and less emphasis is placed on the difference between Extension and non-Extension audiences as they relate to nutrition and health behavior. From an administrative perspective, airing these types of differences between the 1862 and 1890 programs certainly does not help Extension's credibility. The place to deal with these differences is internally and not with our clientele.

PROCEDURES

There is a lack of depth in the procedures section. While adequate attention appears to have been devoted to sampling and data analysis, information relating to instrumentation is lacking. There is no evidence to support the pilot testing of the instrument and no mention of validity and reliability. These are measuring tools which ensure the quality of the instrument and thus the accuracy of the data. Without these checks and balances, we cannot be sure of the data and the quality of the findings. There is also no evidence of any type of special training for the interviewers. In conducting telephone or personal interviews, training is essential to ensure that proper and consistent procedures are followed in posing questions, recording results, handling problem interviewees, and selecting alternative respondents when primary respondents are unavailable. As a consumer of research, information relating to instrumentation is critical in making decisions relating to the quality of the research and its practical use.

Sampling

Sampling procedures are more detailed, but still it is difficult to follow how the various samples were chosen. It does appear that some type of random selection process occurred. However, questions relating to how many counties were in each population size group, coordination between the 1862 and 1890 programs regarding sample selection, selection of the twenty-three counties to participate in the study, and what provisions and how often was the "alternate respondents" process used, are unclear and need further explanation. The sample selection process for non-Extension respondents relating to the 1890 sample is definitely awkward. The neighborhood sampling process may have biased the findings. The researchers recognized the probability of this error by pointing

out the "ripple effect" which probably occurs in close-knit neighborhoods. There is no information relating to the percent of respondents participating in the study, thus creating doubt over the adequacy of the information used to develop findings and make recommendations.

Collection and Analysis of Data

This section certainly gives some insight into data collection and analysis. There should have been some biographical information regarding the Extension and non-Extension respondents presented. This type of information could help the reader to compare the two groups and see if there were similar traits between the respondent categories. Data relating to income, age, family size, educational level, etc., would have been useful in comparing the treatment and control group.

The Likert-type scale used in the study is somewhat vague. Why was there a need to use two scales? Also, it is difficult to know how the scale were used since the points on the scales are not identified.

The statistical technique and analysis seem acceptable. However, when using multiple one-way analysis of variance, there is more of a possibility for chance happenings to occur. In all likelihood, at least one of the items, maybe more, where a statistical difference occurred, was probably due to chance. Finally, why were two alpha levels (.05 & .01) established? It seems that either would have been appropriate, but both might be questionable.

RESULTS

The data are presented in an easily followed pattern. Tables are correctly formulated, and the data presented are keys to interpreting the results. In Table 1, there are 19 items. Nine items in the 1862 program were statistically significant and two items in the 1890 program. However, we should question whether the differences in the scores are of practical significance. A statistical significance simply means that answers are probably <u>not</u> due to chance. Practical significance is whether the difference is great enough to change, modify, or redirect programming based on these differences. In this situation, we might question whether the differences are great enough to really justify our efforts or support our programming, especially since there are probably other agencies interacting with CES clientele and may be attributing to some part of these differences. The same analysis would apply to Table 2.

The real concern in the results section is that based upon the levels set for indicating satisfactory performance in food buying, food preparation, and food consumption, both the 1862 and 1890 programs are not that effective.

CONCLUSIONS

The strong implications outlined in the "conclusions" section relate to the difference between the quality of the 1862 program and the 1890 program, rather than the differences between Extension audiences and non-Extension audiences. While this may need to be examined, the "Purpose of the Study" did not elevate the comparison between the 1862 and 1890 programs to the extent that it is addressed in the conclusions section. While this difference may exist, it would be much better to deal with it internally.

In conducting impact studies, we look for the social and economic indicators of success. While there appear to be indications of some success from the "social" indicators, there is no mention of impact from an economic perspective. If time and resources are to be utilized to secure this type of information, why not build some type of impact measure of economic success into the study? While this is difficult, we must consider this area in the future. From an administrative perspective, the study would have been much stronger if economic indicators were also a part of the study.

The researcher did recognize the importance of strengthening programming in the affective domain, and suggested that future efforts not only deal with the knowledge aspect of human behavior relating to food and nutrition but also promote beliefs and attitudes that will facilitate behavioral change.

LOUISIANA COOPERATIVE EXTENSION SERVICE
HOUSING PROGRAM IMPACT STUDY

Claudette H. Reichel
Joe W. Kotrlik

Danny L. Cheatham

The researchers recognize the importance of conducting impact studies and reference the Accountability and Evaluation (A/E) System which has recently been introduced and implemented within the Cooperative Extension Service. They not only recognize the "directive" set forth by the A/E system, but mention the positive side of these efforts by referring to them as "exciting opportunities."

The design rationale of the study is clearly articulated and supported by prominent individuals within the profession.

The purpose is stated in a clear and concise manner with the objectives being specific and well defined.

PROCEDURES

The "comparison group research design" appears to be appropriate and this case merits consideration. The researchers should be complimented on their ingenuity and creative approach in the study design.

Instrumentation

Development of the questionnaire(s) is the key to collecting useable and quality information. This section lacks specificity and is void of information relating to the type of questions, subject-matter content, rating scales, and length of the instruments. There is evidence of field testing the instrument, but some type of statement regarding the type and size of the group used in this effort, along with what type of corrections were made, might strengthen the "instrumentation" area. There is no mention of reliability and validity checks with the instrument. A reliability check using the field test data could have been run and used to make corrections in the instruments, had there been a need. Obviously, some type of content validity should have been established with the instruments. This may have been carried out but omitted from the write-up. As a consumer of research, certainly informaton pertaining to these two areas should be included in the research project.

Population/Sample Selection

The populations were clearly defined and the sampling process articulated in an understandable and research-oriented manner. The sample sizes appear to be adequate and obviously a random process was used in the samples selected. The comparison sample was stratified by sex and geographic location. No clear explanation was given as to why these variables were chosen, other than the assumption made that both were important in comparability of the test and comparison groups. Other variables such as income, education, and age would also seem to be important variables which probably should be considered. The final percent of those individuals participating in the interviews were more than appropriate (97.5% Extension and 90.1% general public). These return rates are excellent. The researchers did recognize the need for alternative respondents and made preparation prior to the interviewing process. These efforts indicate a well thought out design and implementation plan.

Telephone interview packets were prepared and distributed to those agents conducting the interviews. However, in order to ensure consistency and quality data, some type of interview training should have been conducted. The researchers recognize this problem and mention the need for training interviewers in the "logistical problems" section toward the end of the paper.

Treatment and Analysis of Data

The treatment and analysis of data section appears to be adequate but may lack specificity regarding the point system relating to the adoption score. More information relating to the subject-matter content and how questions were asked on the instruments would have been helpful to the reader in gaining a more comprehensive understanding of this area. The "point system" used was validated by a panel of experts, which is commendable.

A lack of clarity exists regarding how CES participation was determined. In other words, how were levels of participation, i.e., workshops versus newsletter, taken into consideration? Obviously, the depth of training, length of training and quality of training indeed would make a difference in adoption scores. There are no clear explanations as to how these differences were taken into consideration in the study.

Analysis of some type of biographical data would have been helpful to the consumer of this research in understanding the similarities and differences between the two groups.

The t-test and chi square analysis are appropriate statistical tests for this study. However, Table 1 shows unequal sample sizes between the topic audiences and general public. These sample sizes are disproportionate and when using a t-test can tend to compromise the use of this statistical test. Some type of procedure to equalize these sample sizes might be appropriate. An alpha level of .05 is acceptable; however, Table 1 references several alpha levels (.05, .01, .001, and .0001). The .05 reference would have been sufficient.

Again, some type of reference to a post reliability check of the instruments and its mentioning in the write-up would have been useful in determining the quality of the data collected from the instruments.

The researchers do recognize that there is a possibility of interaction (other influences from other sources) occurring within the individuals who have participated in the LCES housing program.

RESULTS

The results section is comprehensive and well written. The analysis addresses three subject-matter content areas: (1) Home Planning and Selection, (2) Home Maintenance and Repair, and (3) Energy Efficient Design. The objective which was stated earlier is very general. Rather than simply looking at the differences which existed between the LCES housing program audience and the general public, the objective should have been more specific. Throughout the discussion of the results, the researchers use "significantly." It is difficult to determine if the writers are referring to statistical or practical significance. While differences in adoption practices range from six percent to sixteen percent between Extension and non-Extension audiences, these differences are rather small. With the possible influence from other sources on the Extension audience, these percentages might not be sufficient to infer "practical" significant impact.

The inclusion of economic indicators of impact is certainly commendable. These estimated impacts are sizeable in dollar terms and strengthen the use of the study from an accountability perspective. The method used to project the amount of kilowatt hours of electricity saved certainly merits special mentioning. This approach is creative and appears to be sound. While economic indicators are included, more information on how these projections were made along with the mechanics of how these dollars were saved would have strengthened the results.

The data appears to support the findings of the study with the exception of numbers 5, 6, and 8. These three findings indicate that a significant difference existed between Extension and non-Extension audiences in space-efficient design, cost-cutting construction techniques, contractual/remodeling precautions, and kitchen design. However, in the results section under "Home Planning and Selection," the write-up is contrary to the findings mentioned above.

CONCLUSIONS/RECOMMENDATIONS

The researchers indicated that in most instances a high level of adoption occurred and that LCES housing education efforts were effective in bringing about change. Certainly an impact was made but the changes between Extension and non-Extension audiences were somewhat small (6% - 16%). The estimated savings resulting from these changes were more impressive.

The researchers are to be commended for their recommendation to replicate the study in 1988. Base data will have been established and hopefully more exact results can be attained.

We must be careful not to overwork our clientele by scheduling multiple impact studies simultaneously. Many of Extension's clientele are involved in multiple programs and can become sensitive to these demands. We must be selective and address those high priority areas and ensure that the data collected can be used with multiple audiences. The researchers recognize this problem and have articulated their concerns quite well.

NATIONAL STUDY OF EXTENSION'S RESEARCH BASE: IMPLICATIONS FOR EXTENSION EDUCATION

H. Peter Marshall
Robert W. Miller

Danny L. Cheatham

The adequacy of Extension's research base is a worthy research topic and merits special consideration. The rationale for conducting this study could have been strengthened. Obviously there are many reasons which would justify the need for a study of this nature, the most prominent one being the basic mission of CES--dissemination of research-based knowledge.

PURPOSE AND OBJECTIVES

The purpose appears to be to analyze the findings of the national study conducted to analyze and assess the adequacy of Extension's research base. However, before the findings and recommendations can be examined, the procedures and data analysis sections must be clearly understood and principles of conducting sound research must be evident. While an internal study is the place to begin, we cannot totally rely on this knowledge alone. Some type of external assessment must be conducted. Input from ARS, CSRS, other USDA agencies, private research sector, State Experiment Stations, State Department of Agriculture, clientele, etc., must be sought. Before findings and recommendations can be discussed, data from these and other sources must be a part of the overall picture. In this study, we are seeing only one point of view.

The objectives appear to be clearly stated and worthy of study.

PROCEDURES

This section is simply not sufficient for analysis. Possibly the information was omitted because of space or lack of concern for this area in relation to the purpose of the research report.

There is no evidence of how the instrument was developed and what type of information was included. Validity and reliability assessment is unavailable. No evidence of field testing of the instrument is shown.

While Tables 1, 2, and 3 provide the reader with an analysis of individuals participating in the study, there is no information relating to how the sample was chosen, whether randomization occurred, who conducted the interviews, or whether specific training was conducted for those carrying out the interviews. The overall return rate of 77% would seem to be appropriate. However, was there any follow-up to those individuals who did not complete a questionnaire or refused an interview? How were the five land-grant universities chosen for participation in the personal interview phase of the study? How were the selected USDA and research personnel chosen for participation in the study? Were all program areas covered (ANR, HE, CRD, 4-H)?

There is no information regarding statistical procedures used or how and to what extent data was analyzed. Therefore, any speculation would simply not be appropriate. Before any attempt can be made to determine the significance or appropriateness of findings and recommendations, there must be a clear picture of data analysis and an assessment of the quality of these procedures. Without sound research procedures being used, findings and recommendations are of no use and cannot be relied upon.

RESULTS/RECOMMENDATIONS

While the findings of this study appear to be appropriate, speculation as to their being supported by data are difficult to ascertain. Obviously the findings are well stated and address major problems relating to Extension's research base and the relationship between CES and research. The only question might be whether the findings are philosophical beliefs of the research team or actually supported by the data collected and analyzed. In reviewing the findings, the researchers are to be commended for recognizing the importance of "process" oriented skills as they relate to the Extension professional. Both technical and process skills, including needs assessment and program development, are needed for successful Extension employment. The idea of CES taking a proactive role in identifying research needs certainly has merit. While CES has been actively involved in transmitting research needs from the clientele to the scientist, it has been more from a reactive perspective. We need to strengthen our involvement and become more proactive. Our existence depends upon a strong tie to the research knowledge generated at the landgrant universities and a strong relationship between research and CES. Finally this study deals with perceptions. Findings which indicate a short fall in the research base may not necessarily be true but simply a lack of familiarity or access, on the part of Extension staff, regarding research may be the case.

The recommendations have tremendous long term implications for Extension. The study itself will become a key document as Extension looks to the future. The recommendations appear to be supported by the findings. The idea of research utilization being an integral part of education and training is certainly appropriate and should be built into preservice, graduate, and inservice training. Specialists being hired should possess these skills prior to employment.

Determining the role of CES regarding "conducting research" needs clarification. Obviously Seaman Knapp's demonstration efforts in the early 1900's has guided CES for many years and no doubt is still relevant. However, the question remains as to when does demonstration work end and applied research begin, and can we afford to dilute the mission of CES which is basically dissemination of information by allowing or requiring research responsibilities. The strength of the landgrant system is its three part mission with distinct requirements in teaching, research, and service.

Strategic planning, high technology, and delivery of research are some of the major issues facing CES, now and in the future. The question is what type of changes within the organization will be needed and what types of competencies will staff need to possess in order to allow agents and specialists to function effectively.

In reviewing recommendations we must remember that state Extension services are staffed differently and organizational structures are not consistent; therefore, recommendations must be strongly looked at in terms of applicability to a given situation.

Issues which deal with linkeages and relationships, especially between CES and our research counter parts are critical and must receive close and careful analysis, for they may very well be the "keys" to Extension future.

PAPER SESSION 2

MINNESOTA YOUTH POLL:
ASPIRATIONS, FUTURE PLANS AND EXPECTATIONS OF
YOUNG PEOPLE IN MINNESOTA
BY
JOYCE WALKER

PERCEPTIONS OF 4-H ALUMNI FROM FOUR OHIO
COUNTIES CONCERNING THE IMPACT OF 4-H ON
THEIR CAREER DEVELOPMENT
BY
JAN MATULIS

PROBLEMS THAT HAMPER
SUCCESS OF COUNTY 4-H PROGRAMS
BY
LAYLE D. LAWRENCE AND EDWARD K. TUMUSIIME

ASPIRATIONS, FUTURE PLANS AND EXPECTATIONS OF YOUNG PEOPLE IN MINNESOTA

BY
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This paper is based upon a study entitled Minnesota Youth Poll: Aspirations, Future Plans and Expectations of Young People in Minnesota co-authored with colleagues Diane Hedin, Judith Erickson, and Paula Simon. The full study is available as MN Report AD-MR-2512 published by the Agricultural Experiment Station, University of Minnesota.

INTRODUCTION

In this study of the aspirations and expectations of Minnesota teenagers, males and females reflect on their plans and preparation for adult life including careers, family life, sex-role development, success and failure in adulthood, and the influence of family and school on future roles. The data, collected from over 725 high school students, has implications for 4-H career education, for sex-role stereotyping in youth programs, for life skills curriculum development, and for training 4-H leaders in awareness of youth concerns.

A second study reported in this paper is an analysis of 160 essays on the topic, "Would You Rather Be a Man or a Woman?" These essays provide insights into the ways young Minnesotans view male and female roles and responsibilities. Themes center on the world of work, appearance, child-bearing and rearing, emotional/psychological health, discrimination and life style.

PURPOSE AND OBJECTIVES

In order to design relevant curricula for young people in the areas of career awareness, life skills, child care and family life, and community participation, it is necessary to find out what young people think about these topics. Uncertain assumptions about the beliefs and attitudes of youth must be replaced by a thoughtful analysis of the ideas young people themselves articulate. This study seeks to identify a baseline of ideas from which programs can be appropriately developed.

The Minnesota Youth Poll provides a continuing communication channel between the youth of Minnesota and those adults who make decisions about their lives. This poll was undertaken both as a regular edition of the Minnesota Youth Poll and as a background paper for the Conference on the Economic Future of Girls and Young Women held at the Spring Hill Conference Center, May 22-23, 1984, and co-sponsored by Dayton Hudson Corp., Humphrey Institute, University of Minnesota and the Springhill Center.

The special focus of this study was on the differences between young men and young women as they plan for and dream about the future.

The individual pieces of data gathered from the youth poll represent the thoughts and hopes of hundreds of young people as they discuss their dreams and aspirations. When viewed as a whole, this pastiche of youthful observations paints a picture of how young people view their futures. The findings and the quotations serve as brush strokes and splashes of color. They may seem unrelated at times, but when viewed as a totality, they reveal important messages to professionals in 4-H work who care about career preparation, sex role stereotypes, important life skill planning, and preparation for adulthood.

If 4-H is to deal with the present, and help young people prepare for future roles as contributing citizens, workers, and family members, adults need to know where young people want to go, what they want to do, what they hope to accomplish. The job of 4-H professionals and volunteers is not to chart the course for young people, but to empower them to achieve their goals. What young people say has implications for what 4-H teaches and how 4-H prepares adult volunteers to take leadership. It has particular implications for how 4-H as an organization supports and deals with young women who make up the majority of members.

PROCEDURES

Approximately 725 Minnesota high school students in 115 discussion groups from urban, suburban and rural schools and in one adolescent treatment center participated in this poll in April, 1984. This is not a random sample of Minnesota youth, but the schools and youth agencies selected are representative of youth by geographic area. Two alternative programs were included to insure that youth experiencing problems in the family, school or community were represented.

In each school location, the questionnaires are administered in a required subject matter course--English or Social Studies. An individual questionnaire was first given to each student and followed by the group questionnaire. For the group discussion the students were asked to sit in small, self-selected groups of between four and six people. In this poll, students were asked to sit in all male and all female groups. One member of each group acted as both recorder and discussion leader. The recorder read the questions, which had been designed to elicit discussion, explanation, and elaboration, and wrote down as much of the commentary as possible.

The group questionnaires were than alalyzed using qualitative methods. This involved first separating the questionnaires by area of residence (i.e., youth from urban, suburban, and rural communities). The answers to each of the questions were then scrutinized for recurring themes and ideas. The response from the individual questionnaires were machine scored and frequences, cross-tabs, correlations, and t-tests were run according to the major variables of age, sex, race, socio-economic status, etc.

The strength of the Youth Poll method is that it combines the best of both research paradigms--qualitative and quantitative techniques. This poll focused on both the meanings and assumptions young people use to understand their world as revealed in the group discussions, as well as obtaining survey data through the individual questionnaires. The Minnesota Youth Poll method was designed to capture and preserve the richness and complexity of the adolescent experience. The information obtained is treated as themes or pictures in an attempt to retain both the "music and lyrics" of what the young people have said.

The second component of the study was a content analysis of 160 essays by young people 10-18 years of age who responded to the topic, "Would You Rather Be a Man or a Woman?" The essays were obtained from the Minneapolis Star and Tribune. The 2,000 essays were grouped in rural, suburban and urban categories, and 160 were randomly selected for analysis. The themes and observations in these writings compliment the larger body of data in the Youth Poll.

RESULTS

Plans and Preparation for Careers

Girls have higher career aspirations than boys; 63% of girls chose professional work, in contrast to 39% of the boys. Girls also were more likely than boys to aspire to jobs at the lowest end of the occuptional scale. Only 2% of girls expected to be homemakers by age 30.

About 25% of the girls said they would work throughout their adulthood, while 63% said they would not work outside the home when they were pregnant or had young children. In contrast, 75% of males indicated they would remain in the work force until they retired.

Males overwhelmingly (93%) chose typical male occupations, while females were far less sterotyped in their career aspirations, with 43% choosing typical women's jobs, 46% choosing typical male jobs, and 11% choosing neutral occupations. Young people believed that their parents held rather similar views as they did on this issue, with male students stating that 80% of their parents wanted them to choose "male" jobs, and female students saying that their parents were rather evenly split on advocating "male" and "female" jobs for them.

The jobs that teenagers in Minnesota hold are overwhelmingly in the service sector--babysitting, working in restaurants, service stations, grocery stores, cleaning houses, performing janitorial service, and doing yard work. Males hold a substanially wider range of jobs than do females. More than half indicated that the jobs they held as teenagers had little positive influence on their future career plans. About one-fourth of respondents did see some relationship between their "youth" jobs and their future careers in that they were learning basic job/work skills and exploring their interests.

A significant relationship was found between the kind of work young persons choose and their father's occupation, but this was not the case for mother's occupation. Overall, both males and females aspire to higher status occupations than those held by their parents.

Almost half the respondents did not know what occupations their parents expected them to choose. The exception was that about 70% of the girls did know their mother's expectations, which usually were similar to their own.

Girls were more likely to see more barriers to achieving their career goals than did males. The greatest barriers for females were the size and shape of the job market, lack of money, not having the necessary skills, not knowing the right people, lack of knowledge of career possibilities, and discrimination because of gender, race, and social class. For males, the most serious barriers were money, the job market, and inadequate knowledge about career options.

Success and Failure in Adult Life

Young women defined success in adulthood more in terms of psychological, philosophical attributes such as happiness, both in general terms and in relationships; while the males were more likely to see success in concrete material forms, such as wealth and high-quality consumer items. Job satisfaction was cited more frequently as a sign of success and happiness for females than for males.

Young women feel more adequately prepared to take on adult responsibilities in the noncareer domain than do young men. Both males and females feel least prepared to be involved in public affairs, manage their finances, provide volunteer service, and raise children effectively. Both sexes feel very well prepared to stay healthy, prevent pregnancy, use their leisure time effectively, and maintain friendships.

Family and School Influence on Future Roles

Almost all respondents reported that girls are protected and sheltered far more than males in the family.

Half the females and two-thirds of the males thought males and females were treated differently in school, with the males charging that girls get preferential treatment. Girls thought that teachers had higher expectations of them.

There were minimal differences between males and females in their interest in taking courses in advanced math, advanced science, computers, and typing. More than three-fourths of all respondents expressed a desire to enroll in such courses. Males were more likely to opt for vocational technical courses. Females showed more interest in foreign languages.

Almost all respondents thought the differential treatment afforded to males and females at home and school had a negative impact on girls and a positive impact on boys. They agreed that young women were socialized to be less assertive, less aggressive, and more dependent than young men. They agrued that the girls' confidence and competence were eroded by being sheltered and protected. Also, girls grew up without understanding that they would have to be responsible for supporting themselves.

Myths and Stereotypes About Sex Roles

Two-thirds of both males and females accepted the assumptions of the Cinderella myth, that most young women want to marry successful, handsome men who will take care of them for the rest of their lives so they won't have to work. About one-fifth of the respondents totally endorsed the concept. Another half offered more qualified agreement, noting that there weren't enough princes to go around and it's a good, but not dependable, idea because death or divorce might happen. Those who rejected Cinderella said that women need to work and be successful as much as men do and that a woman should first find a "sense of herself", then find the prince (or husband). The strong degree of acceptance of this myth seems to contradict the conceptions the young women had of happiness, success, and their career aspirations, described above.

A majority of both males and females also endorsed a slightly different version of the Cinderella idea, but this time from the point of view of the male. We asked them if they believed that a successful man makes enough money so his wife doesn't have to work, and most agreed. The girls' responses revealed a belief that work might be important to them, but they ought to seek permission to do so. Both males and females often saw the woman's income as supplemental.

Seventy percent of males and 60% of females approved and endorsed the Supermom model: successful career, childrearing, homemaking, community affairs, and in keeping her husband happy. About one-fifth aspired to be or to marry a Supermom. Those who offered qualified endorsement often lamented their scarcity. Approximately one-fourth rejected the concept of Supermom on the following grounds; it was a fantasy--perfect families do not exist, Supermom must be miserable if the rest of the family is leading such a charmed life, and it is possible to achieve happiness without being married or without being "superhuman".

There were clear gender differences on whether homemakers were entitled to Social Security benefits. Three-forths of young women thought they were; less than half of the young men agreed. Those who supported the current policy of not providing benefits to homemakers built their case strictly on economic reasons. In contrast, those who disagreed with the current policy

did so on higher principles--the dignity and value of all work and that all Americans are entitled to a decent standard of living in old age.

Both males and females defined the health adult as far more similar to sterotypical male characteristics than female ones. The healthy person was described as very aggressive, extremely independent, neither emotional nor unemotional, very competitive, very adventurous, a strong leader, not very concerned about appearance. These characteristics seem to be in conflict with what is now defined as the "female voice," calling for interdependence, connectedness, caring , and nuturing.

Being Male and Female

In response to the question, "Would you rather be male or female?", a clear marjority of the 10-18 year olds indicated a preference for their own gender. Girls were more willing to consider switching to being male (16%) than were boys willing to become female (1%).

There were significant developmental differences between the youngest essayists (10 to 12 year olds) and the oldest (15 -18 year olds) in the rationales used for their choices. The youngest relied almost exclusively on extremely concrete examples and rigid sex role stereotypes about domestic chores, appearance, and childrearing, while the older adolescents focused more on complex and abstract issues such as occupational opportunity, emotional and psychological health, sex discrimination, and inequality of responsibilities between men and women.

Young women argued that the new and wider choices and options currently available to themselves made it advantageous to be a female, while young men asserted the traditional male opportunities and roles were the key benefits of being a male.

CONCLUSIONS AND/OR RECOMMENDATIONS

A pattern of contradiction and conflict about aspirations and expectations permeates the response of the young Minnesotans in our study. Their visions of future work and family roles are both "contemporary" and "traditional" without recognizing the inherent inconsistencies. Both sexes send out a series of mixed messages that say, "We can do it all; we want to have it both ways." Many appear to have mastered the rhetoric of the women's movement and of sexual equality, yet they fall back on traditional sex roles and relationships when they describe concrete expectations for their own futures.

Young men, for example, recognize the inequities women face in the job market, seem to value an income producing partner, and feel that girls would benefit from more risk-taking and less protection in the school and home environment. Yet, at the same time, many believe women are incapable of taking on "men's work," think that women work to "make a little extra money," and feel justified in giving or withholding permission to their prospective wives to take on new roles.

Most young women hold high career goals and a commitment to work throughout their adult lives, yet plan to have and maintain these high-status, high-paying careers while taking time out of the labor market to stay home with their children. Most young women define adult success as the achievement of independence and competence in a chosen career, yet still yearn to find the Prince Charming who will relieve them of the burden of having to work and take care of themselves. Most girls desire equality in the division of labor in their marriage, yet strive to be Supermom, that dynamo who single-handedly manages her house, husband, job, and children with stunning success.

While both sexes reflect these contradictions, they are not as blatant for males as for females. It appears that boys recognize the significant social changes that have occurred but do not feel strongly affected by them. They seem to believe that life will go on pretty much as it always has in terms of education, career preparation, job opportunities, and family life. Girls, on the other hand, seem to have simultaneously incorporated both old myths that women should be passive, obedient, seductive, and dependent as well as the new ones about the importance of economic independence, self-actualization, and equality without realizing that both sets of myths (or values) cannot comfortably co-exist within one female psyche.

While the students have a difficult time seeing their own inconsistent attitudes, they are far more attuned to ambivalent messages that their parents and teachers give about equality between the sexes. Both males and females agree that girls are limited in the amount of risk-taking and initiative allowed at home and at school. This over-protection, they charge, robs girls of the very skills that they will need as adults--assertiveness, independence, and a spirit of adventure. Girls, in particular, express resentment about these practices, and urge their parents and teachers to find some resolution.

For most young women, the strategies for achieving their dreams seem fuzzy at best. Few seem to recognize and comprehend the many ways in which their dreams may be derailed. Almost no one expressed an awareness of the harsh realities that many adult women face as the heads of poverty-level households and as the sole support, economically and emotionally, for their children. Few seemed to know that the majority of women in the labor market are not in the professional, high-skilled careers to which they aspire, but are clustered in the low-paying service occupations. Young women need to have accurate information upon which to base their decisions about he future. A young woman needs to know that current projections indicate that she will be a worker, wife, and mother, in that order, with an increased life expectancy and a 47% chance of divorce.

But it is not only young women who must be better informed about what the future holds, but young men as well. Ultimately, in their partnerships and relationships, both young men and women will have to find ways to resolve

their conflicting expectations of one another. While young men during high school seem to be little affected by changing female expectations, they cannot avoid their implications when marriage and childrearing arrive in just a few years. According to a 1984 report of the Women, Public Policy and Development Project of the Humphrey Institute, University of Minnesota: "The model for the future is that the lives of women and men will be similar. Both will be workers for a majority of their adult lives. Both will be parents." The challenge for today's adolescent is to figure out ways to make this new model work effectively for both young men and young women.

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PROBLEMS THAT HAMPER SUCCESS OF COUNTY 4-H PROGRAMS

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The 4-H club movement has grown from a few corn, canning and poultry clubs in the early 1900s to a nationwide organization of nearly five million rural and urban youth. Since 1914, over 40 million boys and girls have participated in 4-H (USDA, 1983). Because of its success record, the idea of 4-H has spread to more than 80 countries throughout the world.

The 4-H mission is to assist youth in acquiring knowledge, developing life skills and forming attitudes that will enable them to become self-directing, productive and contributing members of society. To achieve this mission, 4-H members participate in a variety of programs provided as the result of action planned and initiated by Cooperative Extension Service personnel in cooperation with volunteer leadership at the local level.

County 4-H programs throughout the states have met with varying degrees of success. A review of available literature reveals that 4-H agents experience difficulty with initiating and organizing 4-H programs (Beckstrand & Allen, 1979); recruiting and retaining committed volunteer leaders (Davis, 1981; Cosner, 1978); and with high dropout rates of older members (Pratt, 1974). An awareness of problems which most seriously hamper success in initiating and operating county 4-H programs may be beneficial to county 4-H agents, state specialists, and extension educators in their efforts to develop and promote programs to more nearly meet the needs of youth.

Objective of the Study

This study was designed to identify major problems in initiating and operating 4-H club activities which most seriously hamper success of county 4-H programs as perceived by 4-H State Youth Leaders and 4-H Program Specialists in the United States.

Research Procedures

Data for the study were secured from a population consisting of 50 4-H State Youth Leaders and a stratified random sample of 49 4-H Program Specialists (Alaska had no Program Specialist). A modified Delphi technique was used to collect the data. The first questionnaire requested each participant to identify the five specific problems perceived to be most serious in hampering success in initiating and operating 4-H programs at the county level.

The second questionnaire, mailed to the same groups, was formulated by a Q-sort committee who edited, condensed and combined

problems identified in the first questionnaire into 74 statements to be rated as follows: 1 - not a problem, 2 - a slight problem, 3 - a moderate problem, and 4 - a severe problem. A total of 70 questionnaires (71 percent) were returned and used in the study. As a check on non-response bias, two key characteristics of non-respondents and respondents were compared. The chi-square statistical test revealed no significant differences between the two groups, thus data presented are considered applicable to the entire population.

Findings

Of the 74 ratable statements, nine received mean ratings of 3 or above from 4-H State Leaders and Program Specialists (Table 1). Four of the problems related to professional leadership; four were operational; and one was economic in nature.

The problem identified as most seriously hampering success of county 4-H programs was "Staff do many things leaders should do." This was followed by "Underuse of the older 4-H members ... " and "Lack of sufficient data to show impact of projects and programs on 4-H'ers." It is noteworthy that funding is not a factor in the first eight items considered most serious.

Table 2 ranks the major problems, with means of 3 or above, that hamper success of county 4-H programs as perceived by 4-H State Leaders and by Program Specialists separately. Overall, State Leaders identified seven problems while Program Specialists rated 12 with means of 3 or above. Six of the seven problems rated 3 or above by State Leaders were also rated above 3 by Program Specialists. However, Program Specialists rated every problem listed in Table 2 to be more severe than did State Leaders with the exception of the item, "Lack of sufficient data to show impact of projects and programs on 4-H'ers." Both groups considered the statement, "Staff do many things volunteer leaders should do," to be the major problem hampering success of county 4-H programs.

Table 3 ranks major problems, with means of 3 or above, that hamper success of county 4-H programs as perceived by participants in various extension service regions of the U.S.A.

Participants in all four regions agreed on two items: "Staff do many things volunteer leaders should do," and "Underuse of older 4-H members in development and initiation of programs, training of younger 4-Hers, etc."

In general, north central respondents tended to rate the statements less harshly than others. However, they were more concerned with inadequate budget from public and private sectors than were others. Southern participants rated two statements exceptionally high, "Rapid turnover of professional staff due to salary, advancement opportunities, etc." (3.67), and "Staff do many things volunteer leaders should do," (3.53).

Recommendations

This study was conducted to identify specific problems in initiating and operating 4-H youth activities which most seriously hamper success of county 4-H programs. Analysis of the data reveals several suggestions for program improvement. The most significant are presented in the form of recommendations.

1. 4-H agents should be trained to recruit volunteer leaders, orient them to 4-H operations and expectations, and then delegate definite responsibilities to them.

2. 4-H agent preservice or inservice training should include the study of time management, advisory committee initiation and operation, and identification and use of local resources, both human and physical.

3. Incentives, such as awards, recognition, trips, conference attendance, and others should be used to motivate a desire to become volunteer leaders and to continue in those positions.

4. To assure mutual understanding, a job description that clearly specifies expectations of each volunteer leader should be prepared.

5. Program data which would indicate impact of projects and programs on 4-H'ers should be compiled and publicized at local, state and national levels.

6. 4-H agents should actively involve older membership in challenging projects and further their personal growth through added responsibility and assistance to younger members.

7. Retention of experienced 4-H agents through attractive salary and advancement opportunities should be encouraged in all counties. This has been noted as a particularly difficult problem in the southern region.

8. Funding for additional professional and paraprofessional positions should be increased, particularly in the north central region.

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Table 1. Overall Major Problems that Hamper Success of County 4-H Programs as Perceived by 4-H State Leaders and Program Specialists

Statement and Rank	Overall Mean N = 70	S.D.
1. Staff do many things leaders should do.	3.29	0.70
2. Underuse of the older 4-H members in development and initiation of programs, training of younger 4-H'ers, etc.	3.13	0.78
3. Lack of sufficient data to show impact of projects and programs on 4-H'ers.	3.11	0.81
4. Underuse of local resources, people, places, materials, etc.	3.06	0.75
5. Agent's time management.	3.06	0.78
6. Inefficient managerial competence of new agents.	3.03	0.85
7. Staff competence and orientation in volunteer leadership development.	3.01	0.65
8. Failure of staff to accurately define and clearly state their expectations of volunteer leaders.	3.01	0.71
9. Lack of adequate funding for professional and paraprofessional positions.	3.00	0.98

Rating Scale: 1 = Not a Problem
2 = A Slight Problem
3 = A Moderate Problem
4 = A Severe Problem

Table 2. Major Problems, with Means of 3 or Above, that Hamper Success of County 4-H Programs as Perceived by 4-H State Leaders and Program Specialists

State Leaders Statement and Rank	Mean (n=38)	Program Specialists Statement and Rank	Mean (n=32)
1. Staff do many things volunteer leaders should do.	3.18	1. Staff do many things volunteer leaders should do.	3.41
2. Lack of sufficient data to show impact of projects and programs on 4-H'ers.	3.18	2. Underuse of the older 4-H members in development and initiation of programs, training of younger 4-H'ers, etc.	3.22
3. Lack of adequate funding for professional and para-professional positions.	3.13	3. Agent's time management.	3.13
4. Underuse of the older 4-H members in development and initiation of programs, training of younger 4-H'ers, etc.	3.05	4. Lack of sufficient volunteer leaders.	3.13
5. Underuse of local resources, people, places, materials, etc.	3.05	5. Lack of adequate indepth inservice training of new 4-H staff.	3.10
6. Agent's time management.	3.00	6. Staff competence and orientation in volunteer leadership development.	3.06
7. Inefficient managerial competence of new agents.	3.00	7. Underuse of local resources, people, places, materials, etc.	3.06
		8. Inefficient managerial competence of new agents.	3.06
		9. Failure of staff to accurately define and clearly state expectations of volunteer leaders.	3.06
		10. Agent's refusal to give responsibility and authority to volunteer leaders.	3.03
		11. Lack of sufficient data to show impact of projects and programs on 4-H'ers.	3.03
		12. Rapid turn-over of professional staff due to salary, advancement opportunities, etc.	3.00

Rating Scale: 1 = Not a Problem
2 = A Slight Problem
3 = A Moderate Problem
4 = A Severe Problem

Table 3. Major Problems, with Means of 3 or Above, that Hamper Success of County 4-H Programs as Perceived by 4-H State Leaders and Program Specialists by Regions of the U.S.A.

Western Statement and Rank	Mean (n=17)	Southern Statement and Rank	Mean (n=15)
1. Underuse of older 4-H members in development and initiation of programs, training of younger 4-H'ers, etc.	3.41	1. Rapid turnover of professional staff due to salary, advancement opportunities, etc.	3.67
2. Staff do many things volunteer leaders should do.	3.29	2. Staff do many things volunteer leaders should do.	3.53
3. Lack of sufficient data to show impact of projects and programs on 4-H'ers.	3.29	3. Reluctance of staff to give necessary priority to identifying and contacting prospective persons to serve as volunteer leaders.	3.27
4. Lack of adequate in-depth training of new 4-H staff.	3.18	4. Staff competence and orientation in volunteer leadership development.	3.21
5. Staff competence and orientation in volunteer leadership development.	3.18	5. Failure of staff to accurately define and clearly state their expectations of volunteer leaders.	3.20
6. Ineffective supervision of voluntaer leaders.	3.18	6. Lack of sufficient volunteer leaders.	3.20
7. Underuse of local resources, people, places, materials, etc.	3.18	7. Lack of enough organizational and project leaders to provide each 4-H'er with individual as well as organizational help.	3.20
8. Agent's refusal to give responsibility and authority to volunteer leaders.	3.12	8. Agent's refusal to give responsibility and authority to volunteer leaders.	3.13
9. Failure of staff to accurately define and clearly state their expectations of volunteer leaders.	3.06	9. Inefficient managerial competence of new agents.	3.07
10. No written guidelines for effective program evaluation (evaluation criteria).	3.06	10. Parents should be more informed and involved in 4-H work.	3.07
11. Lack of sufficient volunteer leaders.	3.00	11. Underuse of the older 4-H members in development and initiation of programs, training of younger 4-H'ers, etc.	3.02
12. Lack of adequate funding for professional and paraprofessional positions.	3.00		
13. Agent's time management.	3.00		

North Central Statement and Rank	Mean (n=19)	Northeast Statement and Rank	Mean (n=19)
1. Staff do many things volunteer leaders should do.	3.11	1. Inefficient managerial competence of new agents.	3.26
2. Lack of adequate funding for professional and paraprofessional positions.	3.11	2. Staff do many things volunteer leaders should do.	3.26
3. Lack of sufficient data to show impact of projects and programs on 4-H'ers.	3.11	3. Agent's time management.	3.26
4. Agent's time management.	3.05	4. Lack of sufficient data to show impact of projects and programs on 4-H'ers.	3.16
5. Underuse of the older 4-H membersin development and initiation of programs, training of younger 4-H'ers, etc.	3.05	5. Underuse of local resources, people, places, materials, etc.	3.16
6. Underuse of local resources, people, places, materials, etc.	3.05	6. Lack of funds for publicity, general promotion, new programs, handouts, etc.	3.11
7. Inefficient managerial competence of new agents.	3.00	7. Underuse of the older 4-H members in development and initiation of programs, training of younger 4-H'ers, etc.	3.06
8. Inadequate budget from public and private sector.	3.00	8. Traditional expectations that clientele have of 4-H agents.	3.05
		9. Lack of adequate funding for professional and paraprofessional positions.	3.00
		10. Lack of adequate resources to develop needed age-graded materials, volunteer leader training aids, etc.	3.00
		11. Extreme busy schedule for today's teenager--part-time jobs, heavy school activities, etc.	3.00

Rating Scale: 1 = Not a Problem
2 = A Slight Problem
3 = A Moderate Problem
4 = A Severe Problem

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PERCEPTIONS OF 4-H ALUMNI FROM FOUR OHIO COUNTIES CONCERNING THE IMPACT OF 4-H ON THEIR CAREER DEVELOPMENT

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INTRODUCTION

Setting for the Study

The enhancement of career development is embraced by 4-H as an important program goal. Four-H provides career education to encourage occupational development in several ways. Hoyt (1978) describes one approach as the infusion of career education into existing 4-H projects. Most of the hundreds of different 4-H projects offered provide career and economic training to some extent, according to National 4-H News (1978). Scherer and Gearhart (1978) view this method as an individualized approach to career exploration traditionally employed by 4-H.

A second approach is a distinct career development/employability project. Such projects emerged in the early 1960's, when a trend began "for Extension to work directly with the developmental needs and problems of youth, rather than indirectly through commodity projects" (Banning, 1961, p. 116). Stormer (1980) identifies 4-H projects such as "Let's Start a 4-H Business," "Getting a Summer Job," and "Returning to Work" as examples of readily-identifiable career education programs currently in use.

A third approach is career-oriented activities such as career fairs, seminars, and camps. Also in many 4-H programs is JOBSEARCH, a computer program designed to help individuals identify occupations that coincide with interests and abilities.

Stormer (1980) describes 4-H jobs, employment, and/or careers programs as involving combinations of the various approaches. In his national study, Stormer identifies seven classifications that are representative of these approaches:

1. Programs with a primary emphasis on careers
2. 4-H project related programs with an employability and job emphasis
3. 4-H project related programs with a strong career emphasis
4. Multi-project based career, employment, and job programs

5. 4-H activity programs with a career and employability emphasis
6. Programs with an economic emphasis
7. Programs with a job and employment emphasis

Career education in the Ohio 4-H program typically is represented by all three of these approaches. "Career awareness and career exploration have received much emphasis through Ohio's 4-H projects and statewide activities" (Extension in the Forefront of Economic Development, 1983, p.9).

In addition to the traditional projects offering various degrees of career education, Ohio currently utilizes an individual study project entitled The Nuts and Bolts of Exploring My Future in the World of Work. Geared toward 15- to 18-year-olds, this project focuses on career exploration, employability skill development, and post-secondary considerations.

The Ohio 4-H program also offers non-project career education activities as well. One of the major occupational awareness efforts in the state is Career Day, held annually during State 4-H Congress. JOBSEARCH recently has been incorporated into this program, and is utilized in some counties on an individual basis.

Need for the Study

Meyers (1978) recognizes that many 4-H alumni have become leaders in their occupations. However, he poses the possibility that 4-H may attract high-potential individuals who would achieve occupational success regardless of their participation in the program.

Meyers (1978) maintains that, historically, "success stories" of alumni have been accepted as proof of 4-H program effectiveness. However, he asserts that "hard" evidence now is being stressed to determine program value.

There are several studies which directly or indirectly measure the impact of specific youth organizations on various aspects of career development. Most of the research involves the Future Farmers of America (FFA) and, to a lesser extent, 4-H. Many of the studies focus on current members, while others center on past members.

Of the alumni-related studies, almost all survey selected groups of participants, particularly award winners and college students. The current educational and/or employment status of these individuals is identified, as well as their perceptions of the impact of 4-H and/or other youth organizations on occupational development and decisions.

However, there is a lack of research identifying the occupational and educational status of the general 4-H alumni audience - those who are past members of 4-H regardless of their performance in and out of the program. Similarly, very little research has been conducted to determine the perceived impact of 4-H on the career development of this population.

The need for this type of research is acute at the state level as well as at the national level. In a 1983 local needs survey (Extension Program Emphases as Perceived by Ohio Clientele, 1983, p. 118), Extension clientele in Ohio considered career exploration and self-awareness as among 10 4-H program topics needing the most emphasis. Also, an Ohio Extension Research Needs Committee (1983) indicated that investigation of the impact of 4-H on career development is among the five high-priority

research needs in the Ohio 4-H program.

PURPOSE AND OBJECTIVES

Statement of Problem

The purpose of this study was to ascertain the educational and occupational status of Ohio 4-H alumni and, in particular, their perceptions as to the impact of 4-H on their career development. Also, 4-H involvement characteristics were identified, and relationships were determined among educational/occupational characteristics, perceptions of 4-H impact on career development, and 4-H involvement characteristics.

Research Questions

The research questions addressed by this study were:

1. What are the educational and occupational characteristics of Ohio 4-H alumni as pertaining to: highest level of education completed, current employment status, present occupation, and yearly income in present occupation?
2. What are the 4-H involvement characteristics of Ohio 4-H alumni as pertaining to: years of membership, participation in 4-H career education activities and/or projects, service as an officer in his/her 4-H club, number of years as a 4-H club officer, participation in Junior Leadership, number of years as a Junior Leader, participation in a 4-H contest at the state level, perceived activity level as a 4-H member, and participation in youth organizations in addition to 4-H?
3. What are the perceptions of Ohio 4-H alumni regarding the impact of the 4-H program on their career development, specifically: self-awareness; career awareness, exploration and selection; and work competency development?
4. What is the relationship between educational and occupational characteristics of Ohio 4-H alumni and their perceptions of the impact of 4-H on their career development?
5. What is the relationship between perceptions of Ohio 4-H alumni regarding the impact of the 4-H program on their career development and 4-H involvement factors?
6. What is the relationship between educational/occupational characteristics of Ohio 4-H alumni?

PROCEDURES

Research Design

The survey research design utilized in this study was both descriptive and correlational in nature. Demographic data obtained in the study focused on the educational and occupational characteristics of the subjects and their perceptions as to the impact of 4-H on their career development as part of the descriptive phase of this study. Relationships, comprising the correlational aspect of the study, were determined among occupational/educational characteristics, perceptions of

4-H impact, and 4-H involvement characteristics.

Subjects

The target population in this study was all Ohio 4-H alumni who were 17- and/or 18-year-old members during 1977, 1978, and 1979. The accessible population was 883 Ohio 4-H alumni from Hancock, Darke, Portage, and Licking Counties who were 17- and/or 18-year-old members as of January 1, 1977 through January 1, 1979. The geographical parameters of this population were determined by time, financial, and computer data availability constraints; therefore, selection of the four counties was based on their utilization of computerized 4-H membership lists. The age and year parameters were chosen: 1) to include an alumni sample which would have the greatest likelihood of having completed college and entered an occupation by the time of the study, and 2) to ensure address deliverability, since the rural route system was discontinued in many Ohio counties between 1977 and 1978.

The sample size for this study was determined by the formula $n_o = t^2pq/d^2$ (Cochran, 1977) and was calculated as follows:

$$n_o = \frac{(2)^2(.5)(.5)}{(.05)^2} = 400$$

Since n_o/N is greater than five percent, the sample size was adjusted using the following equation:

$$n = \frac{n_o}{1+n_o/N} = \frac{400}{1+400/883} = 275.3 \text{ or } 275.$$

Proportionate stratified random sampling was used to determine the actual sample. Since the four counties in this study each had different 4-H 17- and 18-year-old enrollee numbers, this sampling method was employed to ensure that a representative proportion of the total sample was drawn from each county.

Although the sample was randomly selected, the accessible population from which it was drawn was chosen on the basis of availability of computerized 4-H membership lists, rather than on randomness. Therefore, the results of this study can be generalized only to that population and not to Ohio 4-H alumni in general. However, data obtained from Ohio 4-H Statistical Results, July 1, 1976 - September 30, 1977; July 1, 1977 - September 30, 1978; and October 1, 1978 - September 30, 1979 illustrate the similarities between 4-H programs in the selected counties and those throughout Ohio.

Instrumentation

The Instrument of this Study. The survey was a three-part instrument developed by the researcher. Part I was a Likert scale section consisting of 32 statements which described how 4-H may have helped the subject identify his or her interests and abilities, explore careers, and acquire general work competencies. The response selection accompanying the statements were: 1, not at all; 2, very little; 3, some; 4, much; and 5, very much. The items in this section reflected three career development concepts recognized in the related literature: 1) self-awareness; 2) career awareness, exploration and selection; and 3) work competency development. Parts II and III pertained to 4-H involvement and educational/employment characteristics.

To establish content validity, the instrument was reviewed by the Extension 4-H Specialist for Older Youth and the members on the graduate committee of the researcher. Part I of the survey then was administered in a field test to 12 Ohio State University graduate students and 4 Franklin County Cooperative Extension Service employees, all of whom were Ohio 4-H alumni. The field test revealed a Part I reliability of .916 using Cronbach's alpha reliability analysis. A reliability of .931 was obtained from an analysis of the sample data.

Reliability estimates for the three career development sections in Part I on the sample data were as follows: self-awareness, .612; career exploration, .896; and work competency development, .914. According to Nunnally (1976), .80 generally is an adequate reliability level for instruments; however, he indicates that a reliability of .50 to .60 may be satisfactory for newly-developed instruments, or sections of instruments, intended to be representative of a construct. Since the reliabilities determined from the sample data were consistent with these guidelines, the Part I sections reflecting 1) self-awareness; 2) career awareness, exploration and selection; and 3) work competency development were treated as career development constructs in correlational analyses with educational/occupational characteristics and 4-H involvement characteristics.

Instrument Administration. The questionnaires, assembled in booklet form according to Dillman (1978) and accompanied by a cover letter and return envelope, were mailed to the subjects on June 1, 1984. Reminder postcards were sent on June 8th, and follow-up survey packets were mailed to non-respondents on June 15th. Instruments which were returned after the predetermined July 2nd deadline were not included in the data analysis.

After the deadline, survey responses of early and late respondents were compared using t-test analyses to estimate the perceptions and characteristics of the non-respondents. According to Miller and Smith (1983), replies of late respondents often provide realistic estimates of non-respondent replies. Therefore, they maintain, generalization of results from the respondents to the entire sample is possible if no differences are observed between early and late respondents on evaluation data.

Data Analysis

Information obtained from the respondents was coded by the researcher and punched on computer cards. All unanswered items were coded as missing data and included on the computer cards. The data were analyzed according to SPSSx (SPSS Inc., 1983).

The information provided by the respondents concerning educational/occupational characteristics, 4-H involvement characteristics, and perceptions of 4-H impact on career development was analyzed separately using frequency distributions, percentages, means, and standard deviations. To facilitate analysis, occupational descriptions provided by the respondents were classified by the researcher according to categories used by Westbrook (1978) in his summary of an adult career development study conducted by the National Assessment of Educational Progress (NAEP) in 1974.

Relationships were determined at an alpha level of .05. The Pearson

correlation coefficient was used to describe the correlations between interval variables; Spearman rank correlation coefficient, between ordinal and interval variables and between ordinal variables; point-biserial correlations, between nominal and interval variables; and Cramer's V statistic, between nominal and ordinal variables.

RESULTS

Response Rate

Of the 275 subjects who were sent questionnaires, 166 or 60.4% responded. There was a total of 162 useable instruments. The four surveys not included in the data analysis were not completed; one was from a 4-H alumnus considerably older than those in the sample, and three were from mentally retarded alumni.

Early v. Late Respondents

There were no significant differences between early and late respondents in any of the survey items. Therefore, the results obtained from the respondents were generalized to the entire sample.

Educational and Occupational Characteristics

All of the respondents completed at least high school, with almost three fourths of these individuals completing some college work or beyond as the highest level of education achieved. Slightly less than one half of all respondents completed college, attended graduate school, or completed graduate school as their highest educational level. Over three fourths of the respondents were employed full-time at home or away from home. More than half of the respondents were employed in professional (19%), clerical (14%), or service-oriented (11%) occupations or were students (10%). Approximately 70% of the respondents had personal yearly incomes of less than $15,000.

4-H Involvement Characteristics

Respondents were enrolled in 4-H for an average of 8.2 years and participated in an average of 3.5 career development activities. Almost 90% of the respondents served as 4-H club officers, with the mean number of officer service years at 3.9. Although the respondents participated as Junior Leaders for an average of 1.8 years, the majority of respondents had not been Junior Leaders. Slightly less than 60% of the respondents had never participated in a 4-H contest at the state level. Over 90% of all respondents perceived themselves as moderately or very active as 4-H members. Almost 90% of the respondents participated in youth organizations in addition to 4-H. The average number of additional youth organizations was 1.7.

Perceptions of 4-H Impact on Career Development

Impact of 4-H on Self-Awareness. Four-H had much or very much impact upon their discovering things they enjoyed doing and things they

did well, according to 92% and 80%, respectively, of the respondents. The mean response score for each of two items concerning discovery of things respondents did not do well and things they did not enjoy doing was approximately 3 on the 5-point scale, indicating that 4-H had some impact in these two areas of self-awareness. The mean response score for the self-awareness construct was 3.7 on the 5-point scale.

Impact of 4-H on Career Awareness, Exploration and Selection. Over one half of the respondents perceived that 4-H had much or very much impact upon their learning that things they enjoyed doing or things they did well could lead to a career. Perceptions of the respondents were mixed as to 4-H impact upon expanding their knowledge of career exploration resources, learning about things to consider in choosing careers, and developing a sense of need to make a career choice; however, the mean response score for each of these items was approximately 3 on the 5-point scale, indicating that 4-H had some impact upon these career awareness areas.

Approximately 80% of the respondents felt that 4-H had some, very little, or no career impact upon their discovering possible obstacles to their career preferences, acquiring information about various careers, and obtaining information about careers of interest to them. The mean response score for each of these three items was approximately 2.6 on the 5-point scale, between very little and some 4-H impact. Over two thirds of the respondents claimed that 4-H had very little or no impact upon their acquiring information about their present occupations or occupational choices.

Seventy percent of the respondents disclosed that their 4-H leaders and other 4-H members had very little or no impact upon their career planning. According to 80% of the respondents, their county 4-H agents had very little or no impact upon their career planning.

The mean response score for the career awareness, exploration and selection construct was 2.7 on the 5-point scale.

Impact of 4-H on Work Competency Development. Approximately 90% of the respondents felt that 4-H had much or very much impact upon their developing responsibility, learning to get along with people, learning to follow directions, learning to cooperate with people, and learning to work unsupervised. According to approximately 85% of the respondents, 4-H had much or very much impact upon their developing self-confidence, learning to make decisions, and developing initiative.

Eighty percent of the respondents perceived 4-H as having much or very much impact upon their learning to do things on time, while almost three fourths of the respondents disclosed that 4-H had much or very much impact upon their learning to keep records. Four-H also had much or very much impact upon their learning to use free time productively, learning to manage time efficiently, and developing speaking skills, as perceived by over two thirds of the respondents.

A slight majority of the respondents indicated that 4-H had very little or no impact upon their acquiring job-interviewing skills. Four-H had very little or no impact upon their learning how to apply for jobs and how to prepare a resume, according to 75% and 85%, respectively, of the respondents. The mean response score for the work competency development construct was 3.8 on the 5-point scale.

Relationships Among the Variables

Relationships were interpreted according to the following scale established by Davis (1971):

Coefficient	Description
.70 or higher	very strong relationship
.50 to .69	substantial relationship
.30 to .49	moderate relationship
.10 to .29	low relationship
.01 to .09	negligible relationship

Moderate, positive relationships were found between the number of 4-H career education activities in which the alumni participated and the perceived impact of 4-H on career exploration (r=0.352), and between the number of career education activities and the perceived 4-H impact on work competency development (r=0.334). As the number of career education activities or projects in which the alumni participated increased, the perceived impact of 4-H on career exploration and work competency development tended to increase.

A moderate, positive association was revealed between the perceived 4-H activity level of the alumni and their perceptions of 4-H impact on work competency development (r_s=0.342). The more active the alumni perceived themselves as 4-H members, the greater the perceived impact of 4-H on work competency development tended to be.

Significant relationships also were observed between 28 other pairs of variables, but all of these relationships were low. All other correlations were insignificant at an alpha level of .05.

CONCLUSIONS

Conclusions drawn from the findings are presented by addressing each of the six research questions posed in this study. All conclusions made in this section refer to the Ohio 4-H alumni from Darke, Hancock, Licking, and Portage Counties who were 17- and/or 18-year-old members as of January 1, 1977 through January 1, 1979.

Conclusions Concerning Educational and Occupational Characteristics

1. Typical alumni completed at least some college work, with the majority of college attendees receiving a degree or attending graduate school as the highest level of education attained.
2. Most of the alumni were employed full-time at home or away from home.
3. A majority of the alumni were students or were employed in professional, clerical, or service-oriented ocupations. Professional occupations were the most common among alumni careers.
4. A typical alumnus had a personal yearly income of less than $15,000.

Conclusions Concerning 4-H Involvement Characteristics

1. The average alumnus was a 4-H member for 8.2 years.
2. Alumni participated in an average of 3.5 career education activities or projects during their membership.
3. Most of the alumni were 4-H club officers, with an average of 3.9

years of officer service for all alumni.

4. The majority of alumni were not Junior Leaders. For all alumni, the average number of years as a Junior Leader was 1.8.
5. The majority of alumni had not participated in any 4-H contests at the state level.
6. Most of the alumni perceived themselves as moderately active or very active as 4-H members.
7. Most of the alumni participated in one or more youth organizations in addition to 4-H, with the average number of additional youth organizations being 1.7.

Conclusions Concerning Perceptions of 4-H Impact on Career Development

Impact of 4-H on Self-Awareness. Most of the alumni felt that 4-H had much or very much impact upon their discovering things they enjoyed doing and things they did well. However, the alumni generally considered 4-H to have less impact in helping them discover things they did not do well and things they did not enjoy doing.

In general, alumni felt that 4-H had much impact on their self-awareness, the recognition of their interests and abilities. This perception particularly applied to positive interests and abilities.

4-H Impact on Career Awareness, Exploration and Selection. The alumni tended to view 4-H as having much impact upon their learning that things they enjoyed doing and things they did well could lead to a career. According to the alumni, 4-H also had some impact upon expanding their knowledge of career exploration resources, learning about things to consider in choosing careers, and developing a sense of need to make a career choice. Four-H also had some impact, although to a lesser degree, upon their discovering possible obstacles to their career preferences and acquiring information about careers. In general, alumni viewed 4-H as having very little impact upon their acquiring information about their present occupations or occupational choices. County agents, 4-H leaders, and other 4-H members tended to have very little impact in alumni career planning.

Overall, alumni perceived 4-H as having some impact upon their career awareness, exploration and selection. Greatest impact was attributed to 4-H in general career awareness concerning recognition of interests and abilities as leading to a career, knowledge of career exploration resources, career considerations, and sense of need to make a career choice. Less impact was ascribed to 4-H relative to more specific areas such as discovering career obstacles and acquiring career information. However, 4-H was least influential in alumni career planning through county 4-H agents, 4-H leaders, and other 4-H members.

4-H Impact on Work Competency Development. Alumni perceived 4-H as having much impact on the development of work competencies, specifically: responsibility, compatability, following directions, cooperation, working unsupervised, self-confidence, decision-making, initiative, timely task completion, record keeping, productive leisure time use, time management, and speaking skills. However, alumni generally considered 4-H to have very little impact upon their developing job interviewing and job application skills, and in particular, resume preparation skills.

Overall, 4-H tended to have much impact upon the development of general work competencies. These adaptability skills reflect humanization

and good work habits and typically are acquired through a variety of instructional modes.

However, 4-H had very little impact on the development of more specific work competencies, those job-seeking skills usually acquired through a more focused, purposive instructional method.

Conclusions Concerning Relationships Among the Variables

1. As the number of 4-H career education activities or projects in which the alumni were involved increased, the perceived impact of 4-H on career exploration and work competency development tended to increase.
2. The more active the alumni perceived themselves as 4-H members, the greater the perceived impact of 4-H on work competency development tended to be.
3. Significant, but low, relationships occurred between 28 other pairs of variables.
4. Correlations between 44 pairs of variables were insignificant at an alpha level of .05.

RECOMMENDATIONS

Recommendations for the Ohio 4-H Program

1. Four-H members should be encouraged to participate in a broad range of 4-H activities, both related and unrelated to their major project area, to help them become aware of their disinterests and limitations as well as their interests and abilities.
2. Four-H should both continue and e[illegible]nd current career awareness efforts, those general prerequisi[illegible]s to career exploration which include: 1) recognition of inter[illegible]ts and abilities as leading to a career, 2) sense of need to make a career choice, 3) career choice considerations, and 4) knowledge of career information resources.
3. Career exploration efforts should be expanded greatly. In particular, 4-H members need more information about a variety of careers, as well as careers of interest to them.
4. Four-H leaders should be provided with materials and training to enable them to initiate career education components within their clubs or to augment existing efforts.
5. Four-H must continue to offer opportunities for general work competency development, the acquisition of humanizing skills and good work habits.
6. Greater emphasis should be placed upon the acquisition of specific work competencies, those job-seeking skills relative to interviewing for jobs, applying for jobs, and preparing resumes.

Recommendations for Further Study

1. Additional studies concerning the impact of 4-H on career development should be conducted, both in Ohio and in other states, on a state-wide basis.

2. Four-H alumni populations with wider age parameters should be surveyed concerning their perceptions of the impact of 4-H on their career development.
3. Continued research on the impact of 4-H on career development is imperative, in view of the increased interest in Ohio 4-H career education expansion. The 4-H program is planning and implementing more distinct, focused career education than traditionally has been the case. Therefore, research will be needed to determine the efficacy of these expanded efforts.

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CRITIQUE

PROBLEMS THAT HAMPER SUCCESS OF COUNTY 4-H PROGRAMS

by

Edward K. Tumusiime
Layle D. Lawrence

PERCEPTIONS OF 4-H ALUMNI FROM FOUR OHIO COUNTIES CONCERNING THE IMPACT OF 4-H ON THEIR CAREER DEVELOPMENT

by

Janet K. Matulis
Lowell E. Hedges

ASPIRATIONS, FUTURE PLANS AND EXPECTATIONS OF YOUNG PEOPLE IN MINNESOTA

by

Joyce Walker

DISCUSSANT

Edgar P. Yoder
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PROBLEMS THAT HAMPER SUCCESS OF COUNTY 4-H PROGRAMS

Edward K. Tumusiime and Layle D. Larence

This study examines a topic of increasing interest to all of us, "What can we do to insure that local 4-H programs continue to be successful?" This ia an especially important topic when one examines the continuing changes in our 4-H youth population and the societal context in which local 4-H programs operate. The authors do provide some rationale (need) for the study by briefly noting problems identified by others regarding the "successful" operation of 4-H programs. This study represents a continuation of previous research in an attempt to provide a more systematic examination regarding factors which influence the success of county 4-H programs. The authors are to be commended for attempting to identify these factors from a national perspective and thus, no doubt, adding increased credibility to the results. I would also commend the authors for using the Delphi technique which typically provides an opportunity to arrive at consensus. In their recommendations section, the authors concisely combine the information reported and suggest some pragmatic ways to deal with the major problems identified in Tables 1 and 2.

The following comments and questions are forwarded within the framework of "constructive criticism", with an attempt to clarify specific aspects related to the research. Since this represents descriptive survey research, the validity of the results need to be examined with due consideration of the major validity threats pertinent to descriptive survey research.

With regard to the sampling approach used for identifying the 49 4-H program specialists, it would be helpful to have some additional information and a rationale in the paper with regard to the strata used in the sampling procedure. In addition, information regarding procedures used for determining sample size should be included. Thus, without such information, I have a concern with sampling error as a threat to the validity of the study.

In the procedures section it would be helpful to have a definitive statement regarding the exact target population. It is very clear that one group we are talking about is all state 4-H youth leaders. However, I'm not certain what the target population is for the 4-H program specialists. Does it include 4-H program specialists for leadership, home economics, youth development, etc.? The authors do not report how the frames for the

target populations were identified, thus the reader has to assume that a directory, perhaps from U.S.D.A., was used. With that as an assumption, I examined the list of "State and Assistant State Leaders of 4-H Youth Development and Other State Staff" published in 1984 by the Cooperative Extension Service, U.S.D.A. There appear to be approximately 300 people on that list with various titles that could fit under the general classification of 4-H program specialist. I'm not certain from the description in the paper whether these are all considered part of the target population. There is a general question then with regard to selection error and frame error as a threat to validity.

The authors indicate that two key characteristics were checked to assess non-response error, and there was no degree of association between respondents and non-respondents with regard to those key characteristics. However, we are not told what those two key characteristics were, nor are we provided a rationale for using those two key characteristics. It would also be helpful to provide information regarding the response rate for questionnaire one, and to conduct a comparison of early vs. late respondents with regard to the results from questionnaire number two.

The investigators used an approach, a Q-Sort Committee, to deal with some form of measurement error. The use of such an approach tends to lend greater credibility to the procedure wherein statements obtained from round one of the Delphi were consolidated for the instrument used in round two of the Delphi. It would be helpful to know the composition of that committee and what their express purpose was. I don't believe they performed the typical functions we associate with the Q-Sort. I would suggest calling this committee by some other name .

There is a great degree of uniformity between the two sub-groups with regard to the major problems that hamper success of county 4-H programs. I wonder if local agents would also have identified the same major problems? It also would have been helpful to have a table with all the statements and their respective means to identify factors that were not considered problems. Finally an operational definition regarding "success" of county 4-H programs would help clarify for the reader the major criterion used in the study.

PERCEPTIONS OF 4-H ALUMNI FROM FOUR OHIO COUNTIES
CONCERNING THE IMPACT OF 4-H ON THEIR CAREER DEVELOPMENT

Janet K. Matulis and Lowell E. Hedges

This paper represents several excellent points pertaining to the research methodology used for descriptive survey/correlational research. As one examines the introduction section to the paper there evolves a sense of direction and purpose. There is a fairly extensive theoretical basis developed pertaining to career development and the involvement of 4-H in that effort as it relates to 4-H age youth. This theoretical basis is combined with information from the Ohio Extension Research Needs Committee to "set the stage for the study". In other words, the introduction leads very directly to the statement of the problem and the six research questions. The research questions are well stated and contain sufficient information to enable the reader to develop some general definitions of terms (4-H involvement characteristics, educational and occupational characteristics, etc.) important in this study. In examing this study with respect to the threats to validity in descriptive survey research, one is impressed with the exhaustive efforts made by the investigators to minimize the threats to validity.

The investigators have extensively documented their target population and the accessible population and have correctly identified that as a limiting factor with regard to generalizability. They specifically indicate why the target and accessible populations are different. They specifically provide a rationale for using the accessible population they used. The determination of sample size was extensively documented. Thus sampling error as a threat to the study has been minimized. The rationale used to describe the sampling procedure identifies the manner in which the frame was identified, thus frame error has been minimized as a threat.

Non-response error as a threat to validity has been dealt with by the authors in two ways. First, they used relatively extensive follow-up procedures suggested by Dillman. Additionally, a statistical comparison of early respondents with late respondents indicated no significant differences in any of the survey items.

Measurement error has been considered by the investigators in that content validity was established by using a panel consisting of one Extension 4-H Specialist and the inventigator's graduate committee.

Additionally, internal consistency was established using Cronbach's alpha with a group of 12 Ohio State graduate students and four Franklin County Extension employees. This yielded a Cronbach alpha of .916. We typically suggest that internal consistency be extablished with a group of people identical as possible to the sample. Would it have been possible to identify 50 Ohio 4-H alumni from lets say Franklin or Delaware Counties that met the same population parameters as for the study sample and administer the instrument and determine its reliability?

The following questions are raised as "food for thought". What was the rationale for the inclusion of the educational and occupational characteristics and 4-H involvement characteristics used in this study? In the findings section we find "significant relationships also were observed between 28 other pairs of variables, but all of these relationships were "low". Have other people studied some of these factors and found similar results or different results. There is nothing in the paper that substantiates why the various characteristics were studied. The need for the study section indicated several studies had been conducted with FFA and 4-H. Did they also have similar findings? Without having the opportunity to review the questionnaire, one raises some questions about how certain factors were measured. For example, the authors talk about "moderately active" 4-H members. Is this an index that was calculated from responses to questions or is it individuals' perceptions reported for one specific question? In reporting results, we find that "over one half .... perceived 4-H ... had much impact." The term over "one half" is rather ambiguous since no specific percentages are reported.

ASPIRATIONS, FUTURE PLANS AND EXPECTATIONS
OF YOUNG PEOPLE IN MINNESOTA

Joyce Walker

The Walker study is somewhat similar to the Matulis and Hedges study since it involves the general area of career development and self development. The data source for the Walker study is based on information obtained primarily from high school age youth, irrespective of whether or not they are 4-H members. The basic assumption in this study, as was the case in the Matulis and Hedges study, is that youth provide a rich source of information, as expressed through their perceptions, beliefs and feelings, of which we need to be aware as we design programs and assist people adults to work with youth.

This paper combines two types of data in an attempt to provide a "rich" baseline of information. The first type of data represents the more quantitative approach to document how youth feel and perceive their situation. The individual questionnaires are then supplemented with qualitative types of information obtained in group discussions. I commend the investigator for attempting to gather the ipsative feelings of these youth. It adds some "richness" to the data that check marks and circles on questionnaires don't convey. This is especially evident when one examines the sections discussing the "Cinderella myth" and the "Supermom" model.

The introduction provides a brief overview of the content which is to follow. I noted a rather extensive reference list was attached, but I'm uncertain how those references were used in the paper. My hunch is that those materials were used to build a structure or framework for conducting this study, but that framework doesn't appear here. Perhaps it was not included because of space limitations in the paper. The introduction could be strengthened by tying in some of the findings from previous work, such as that conducted by Rexroat and Schehan.

The purpose and objectives section of the paper really contains two segments--the purpose and some additional justification for the study. I would suggest a more concise statement of purpose with associated objectives. The special focus of this study--the differences between young men and young women--almost gets lost with the way this section of the paper is structured. Perhaps taking some of the material in this section and either including it in the introduction or creating a separate section titled "Need for the Study" would help bring a more definitive focus to the purpose of study section.

The authors make it very clear that the students were not selected at random. Some form of non-random sampling approach was used to identify the 725 Minnesota high school students. It would be helpful to know how many schools were included. We are assured that the group of schools used are representative of the urban, suburban and rural schools in Minnesota. The individual questionnaire was administered to students enrolled in required English or social studies courses. How were these sections of courses identified? If Minnesota develops course sections in a manner similar to what some other states do, it's possible to end up with a system of tracking disguised under some other name. It would be helpful to have some information about the composition of those classes. A definitive description of the target and accessible population would be helpful. Would it have been possible to use a multi-stage (cluster) sampling approach to turn the study sample into a random sample?

The qualitative data were in part collected from group discussions where students sat either in groups of all males or all females. Is there a rationale for having homogeneous groups and, if so, it would be helpful to have it presented in the paper. Would we have obtained similar or different results if there had been heterogeneous groups? Was there a reason for having students self-select themselves into the discussion groups?

I don't get the impression the authors are attempting to infer the results of the study beyond the people from whom they obtained information. At least I had that impression until I read the paragraph discussing the data

analysis for information collected from the individual questionnaire. In that paragraph we are told that both descriptive statistics and inferential statistics were utilized. I'm unclear as to the need for inferential statistics (t-tests). The descriptive statistics are fine, but without a rationale for the use of inferential statistics presented in the paper my preference would be to delete any reference to inferential statistics. In reporting and writing a statistical narrative describing relationships between variables, it is helpful to not only report a significant relationship existed but to indicate the magnitude of the relationship.

In summary, this study contains findings that have some strong implications for designing 4-H programs in relation to career and self development. The findings suggest we have not come very far in eliminating sex role stereotyping. How do our 4-H programs contribute to the maintenance of the perceptions held by the youth in this study? How do we better help local leaders design 4-H programs and activities that enable all youth to pursue careers and personal interests in a more "contemporary" context?

PAPER SESSION 3

IS A VOLUNTEER TEACHER SYSTEM EFFECTIVE

BY

DIXIE PORTER JOHNSON

BUILDING AN ORGANIZATIONAL NORM TO BALANCE
PROFESSIONAL/PERSONAL LIVES AMONG
PENNSYLVANIA EXTENSION STAFF

BY

JOAN S. THOMSON, ROBERT B. LEWIS, TENA L. ST. PIERRE AND NANCY E. KIERNAN

A CAUSAL MODEL OF PERSONAL FACTORS INFLUENCING
THE DECISION TO VOLUNTEER AND LEVEL OF INVOLVEMENT
AMONG ADULT 4-H LEADERS

BY

FRED R. ROHS

A CAUSAL MODEL OF PERSONAL FACTORS INFLUENCING PARTICIPATION IN 4-H AMONG ADULT VOLUNTEER LEADERS

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INTRODUCTION

Volunteer and voluntary associations have been part of the American scene from the founding of the nation. Schindler-Rainman and Lippitt (1971) indicated that the trends and changes emerging in the world of volunteerism are exciting because they indicate that volunteerism is once again becoming one of the major means of providing human services. These researchers pointed out that as paid professional service declines, compared to the para-professional and volunteer service, more people will be needed in meaningful volunteer activity. The supply of volunteers is a concern of many agencies and institutions.

A Census Bureau survey conducted in April, 1974 indicated that approximately 37 million Americans over 14 years of age volunteered for some formal voluntary group or organization that year. Others estimate the figure to be as high as 50-70 million (Wilson, 1976). In spite of the vast numbers of the volunteer work force, Boyle and Doughlah (1964) and Coleman (1979) reported that most youth organizations express concern about the scarcity of volunteer youth leaders. One major key to the success of 4-H is volunteer leaders. (Weaver, 1975; Bruny, 1981; Lang, 1979).

To aid in the identification and recruitment of the 4-H volunteer leaders a more thorough understanding of the factors associated with individual volunteer participation in the 4-H program is needed. Smith and Reddy (1971) have proposed that reasons for volunteering include not only social background factors such as age, sex and educational level, but also personality traits and attitudes conducive to volunteer participation.

Smith (1966) proposed a framework of the various factors that influence voluntary participation. Smith termed this framework the Sequential Specificity Model to link, in a causal and time sequence manner, the various factors identified in the research and literature as important independent variables for the prediction of organized voluntary activity.

Using a portion of Smith's Sequential Specificity Model, various personal factors such as social background, personality and attitudinal factors influencing voluntary participation in 4-H were investigated.

A schematic sketch of the model in this study is presented in Figure I.

The Sequential Specificity Model of Voluntary Action (Figure I) hypothesizes social background factors influence personality factors. Personality factors, in turn, influence various general and specific attitudinal factors. These various general and specific attitudinal factors directly influence the dependent variable voluntary participation.

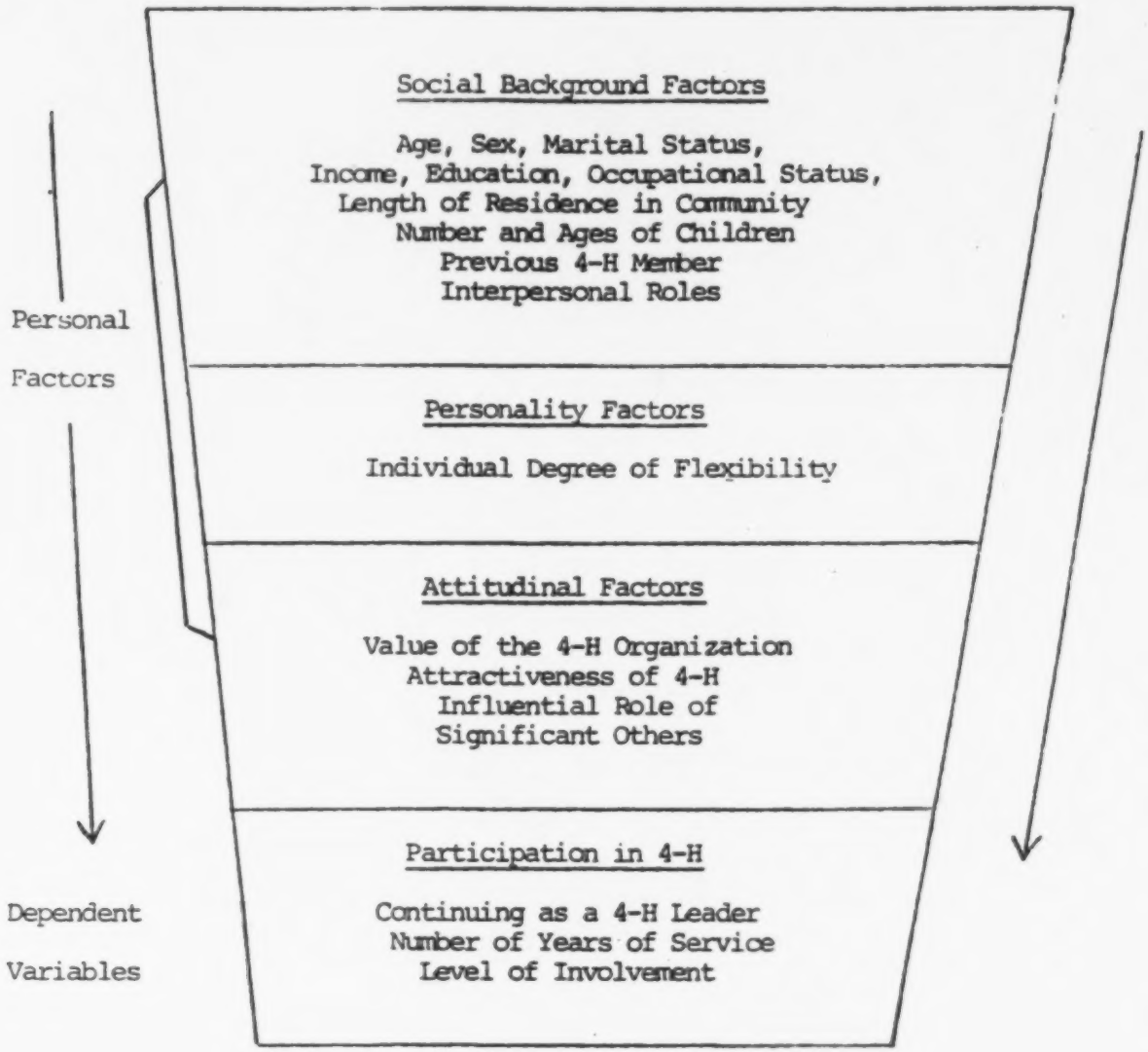


Figure 1 Model of Individual Voluntary Participation and Level of Involvement

PURPOSE AND OBJECTIVES

The purpose of this study was to investigate, using the classificatory scheme offered by Smith and Reddy (1971), the relationship between social background, personality and attitudinal factors and the participation of adult volunteers in the 4-H program in Ohio. Specific objectives were as follows:

1. To describe selected social background characteristics of adult 4-H volunteer leaders and their relationship to a person's level of involvement and decision to volunteer as a 4-H leader. The social background characteristics were age, sex, marital status, income, educational level, occupational status, length of time a resident of the community, previous experience as a 4-H member, number of years of leadership in 4-H, number and ages of children and interpersonal roles within the family.

2. To describe the personality factor, level of individual flexibility, exhibited by adult 4-H volunteer leaders and its relationship to volunteering as a 4-H leader and the level of involvement as a 4-H leader.

3. To describe selected attitudinal characteristics of adult 4-H volunteer leaders and their relationship to volunteering as a 4-H leader and their level of involvement as a 4-H leader. Specifically, attitudes investigated included those relating to the instrumental value of the organization as seen by the volunteers, attractiveness of the organization and the role of significant others in influencing an individual to volunteer as a 4-H leader.

METHODOLOGY

The data were obtained from 4-H leaders who served as 4-H club leaders in Ohio during the 1981 4-H year. Lists of Ohio 4-H leaders for the 1981 4-H year were obtained from a random sample of 30 Ohio counties. From these leader lists, a proportionate random sample was selected from the population. A total of 300 individuals were selected for the sample.

The questionnaire was constructed to collect information on the social background factors, the personality factor flexibility and the attitudinal factors pertaining to attractiveness, instrumental value, and the role of significant others in a person's decision to volunteer. Scales were constructed to measure a person's degree of attractiveness and instrumental value of 4-H. Instrumental value of 4-H and attractiveness were defined as follows:

Instrumental value of 4-H - the extent to which the 4-H organization is needed in society, what purpose does it serve, what benefits does society reap from the existence of this organization.

Attractiveness - what benefits does the individual volunteer leader reap from the 4-H organization, what is so special to the individual about this organization.

The California Psychological Inventory Flexibility Scale was used to measure the personality factor flexibility. Flexibility was defined as the adaptability of a person's thinking and social behavior; their liking for change and innovation and even their preference for things new and untried (Lake, Miles and Earle, 1973). Continued participation as a 4-H leader, length of service and level of involvement were the dependent variables in the study.

The instrument was field tested with 30 Ohio 4-H Adult Volunteer leaders. Cronbach's Alpha coefficients were computed for the three scales. The reliability coefficients for the scales were: Attractiveness of 4-H, .86; Instrumental value of 4-H, .90; and Flexibility, .73.

Data were collected by mail questionnaires. To increase the rate of response, follow up mailings were administered to the non-respondents. This resulted in 72 percent of the leaders responding. The data were analyzed using the services of the Instruction and Research Computer Center of The Ohio State University.

FINDINGS

Characteristics of Ohio 4-H Volunteer Leaders

The average age of the respondents was 39 years. Over 70 percent were female. Over 60 percent of these individuals participated in 4-H as a youth. Eighty-four percent of the respondents were married. Eighty-eight percent of the leaders had children. The number of children by leaders ranged from one to seven with an average number of children of three per family. Seventy-three percent of the leaders reported their children were in 4-H. Twenty-six percent of the leaders identified themselves as "homemakers", 24 percent were employed in some professional field, 24 percent in business, 10 percent in farming and the remaining leaders were either retired or college students.

Seventy-four percent of the leaders resided in a rural area and have lived in their present location for an average of 15.5 years. Fifty-nine percent of the leaders reported annual incomes at or above $20,000, 41 percent reported income below this level.

Forty-three percent of the leaders completed high school, 31 percent had some college education and 14 percent had completed college.

Eighty-one percent of the leaders indicated their parents had not been 4-H leaders. Forty-five percent of the leaders who were married indicated their spouses were also 4-H leaders.

Personality and Attitudinal Factors

To determine a person's level of flexibility, raw scores from the CPI Flexibility Scale were computed by summing the number of items answered correctly. The maximum score possible was 22; the lowest score possible was 0. The higher a person's score, the more flexibility an individual possesses. Data revealed that the mean raw score on the flexibility scale was 7.8. When compared to National norms (9.0) the respondents in this study were less flexibile. Male respondents in the study scored slightly lower (mean raw score 6.5) than did female respondents (mean raw score 8.0).

Scores on the instrumental value and attractiveness scales were determined by summing the responses to the 21 items in each scale on a 5 point basis ranging from 1 (strongly disagree) to 5 (strongly agree). The data revealed 4-H volunteer leaders in this study had a favorable attitude relative to the instrumental value and attractiveness of 4-H with mean scores of 82.3 and 77.3, respectively (63=mid point of each scale).

Leaders were also asked to indicate how much influence different people had on their decision to volunteer as a 4-H leader. The data indicated 4-H club advisors had the most influence on a person's decision to volunteer. Additional significant other categories in order of influence were "other 4-H leaders", "other 4-H'ers", "other parents", "neighbors", "community leaders", and "4-H agents" respectively.

Eighty-six percent of the respondents indicated they were continuing to serve as 4-H volunteer leaders in 1982. On the average, leaders had served 7.3 years. Leaders spent an average of 33.8 hours per month working at the local level as volunteers. Approximately one-half of this time was for participation with local 4-H members in meetings and activities. At the area and state levels, volunteer leaders worked an average of 78.8 hours per year of which 89 percent of the volunteer leaders' time was spent in participation at 4-H camps, fairs, achievement days, mall shows and tours.

Relationships between Social Background, Personality and Attitudinal Factors and Continued Participation, Length of Service and Intensity of Involvement

In analyzing the relationships between social background, personality, attitudinal factors and continued participation, length of service and level of involvement, Pearson Product moment coefficients were calculated. Positive associations, significant at the .05 level, existed between the following (Pearson r coefficients ranged from .12 to .52):

1. Continued participation as a 4-H leader and having a spouse as a leader or children in the program.

2. Length of service as a 4-H leader and length of residence in the community, age of the leader, number of children a leader has under age 9.

3. Total hours spent per month at the local level and the occupational status "homemaker".

4. Total hours spent per year at the area and state levels and the number of children a leader has in the 15-19 year age group, the influence of the 4-H agent, and the influence of other parents.

5. The personality of factor-degree of flexibility and the total hours spent per month at the local level.

6. Length of service, and the instrumental value of 4-H, the influence of a leader's neighbors and the influence of community leaders.

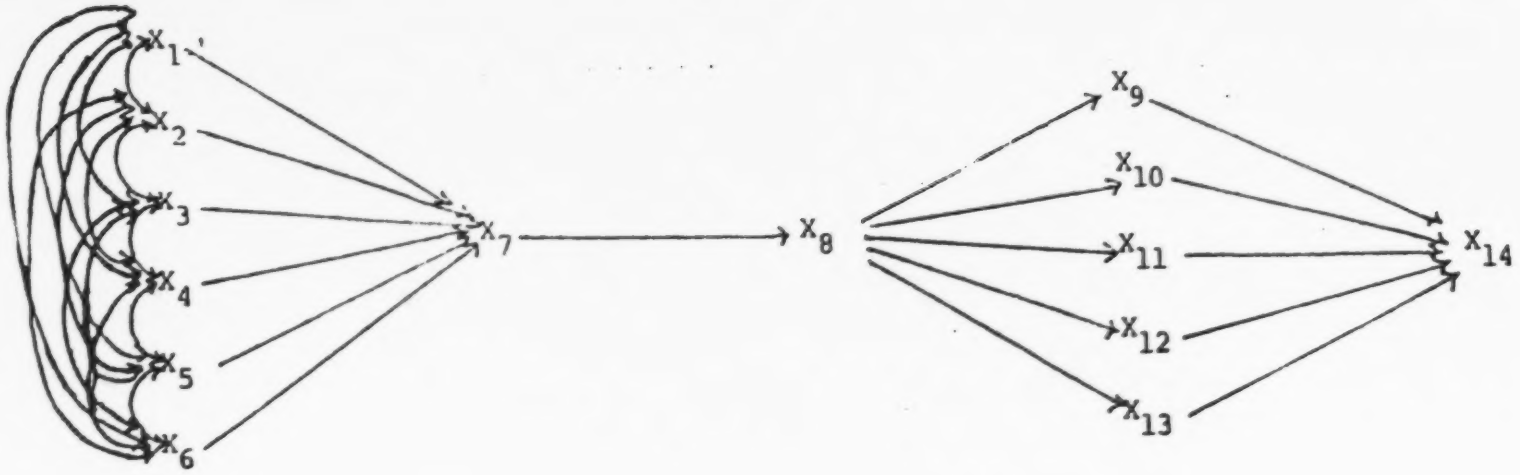
Negative relationships, significant at the .05 level, existed between the following (Pearson r coefficient ranged from -.12 to -.19):

1. A leader's previous experience as a 4-H member, attractiveness to 4-H and continued participation as a 4-H leader.[1]

2. The number of children a leader has ages 12-14, influence of 4-H club advisors and length of service.

Effects of Social Background, Personality and Attitudinal Factors on Continued Participation, Length of Service, and Level of Involvement

A major objective of the study was to determine the magnitude of the effects of selected social background, personality and attitudinal factors on continued participation, length of service and level of involvement of 4-H leaders. Based on the Sequential Specificity Model proposed by Smith (1966), a causal model was constructed to depict the configuration of the sources of influence on the dependent variables (see Figure 2). The path analysis disclosed the following results:



Social Background Factors

X_1 = Age
X_2 = Years as a 4-H Member
X_3 = Income
X_4 = Marital Status
X_5 = Level of Education
X_6 = Parents were Leaders

Personality Factor

X_7 = Degree of Flexibility

General Attitudinal Factor

X_8 = Instrumental Value of 4-H

Specific Attitudinal Factors

X_9 = Attractiveness of 4-H
X_{10} = Influence of Neighbors
X_{11} = Influence of 4-H Agents
X_{12} = Influence of 4-H Club Advisors
X_{13} = Influence of Other Parents

Dependent Variable

X_{14} = Measure of Voluntary Activity (i.e. length of service)

Note: Curved lines indicate correlations between exogenous variables.

Figure 2. Effects of Selected Variables on Continued Participation as a 4-H Volunteer Leader.

1. Social background, personality and attitudinal factors were not significantly related to continued participation as a 4-H leader, the total hours spent per year at the area or state level or the total hours spent per month at the local level.

2. The more influence 4-H club advisors and other 4-H'ers had on a leader, the less years a person would serve as a volunteer 4-H leader (see Figure 3).

3. The more influence the significant other groups, other parents, neighbors, and 4-H agent, had on a leader, the longer would be the volunteer's length of service (see Figure 3).

4. The general attitudinal factor, instrumental value of 4-H, indirectly influences a leader's length of service. These effects were mediated primarily through the specific attitudinal factors of influence of other parents, influence of neighbors and influence of the 4-H agent (see Figure 3).

5. The personality factor (degree of flexibility) was not significantly related to the general attitudinal factor instrumental value of 4-H.

6. The social background factors were not significantly related to the personality factor degree of flexibility.

Analysis of the data indicates that only the general and specific attitudinal factors influenced the dependent variable length of service (Figure 3). For example, a one unit change in degree of influence of other 4-H'ers is associated with a -.342 change (expressed as a standardized path coefficient) in length of service (Figure 3). The general attitudinal factor instrumental value of 4-H indirectly influenced a leader's length of service through the specific attitudinal factors.

In Figure 3, a one unit change in the scale score for instrumental value of 4-H is associated with a .301 change in the degree of influence of neighbors. A one unit change in the degree of influence of neighbors was then associated with a .238 unit change in a leader's length of service.

The social background, personality and general attitudinal factors in the study may directly influence the dependent variable length of service, rather than influencing length of service indirectly through intervening personality and attitudinal factors. To investigate the existence of these direct relationships and isolate those predictor variables that influence the dependent variable, a step-wise regression analysis was used to determine the step-wise entry of the selected independent variables in the explanation of the variance in length of service.

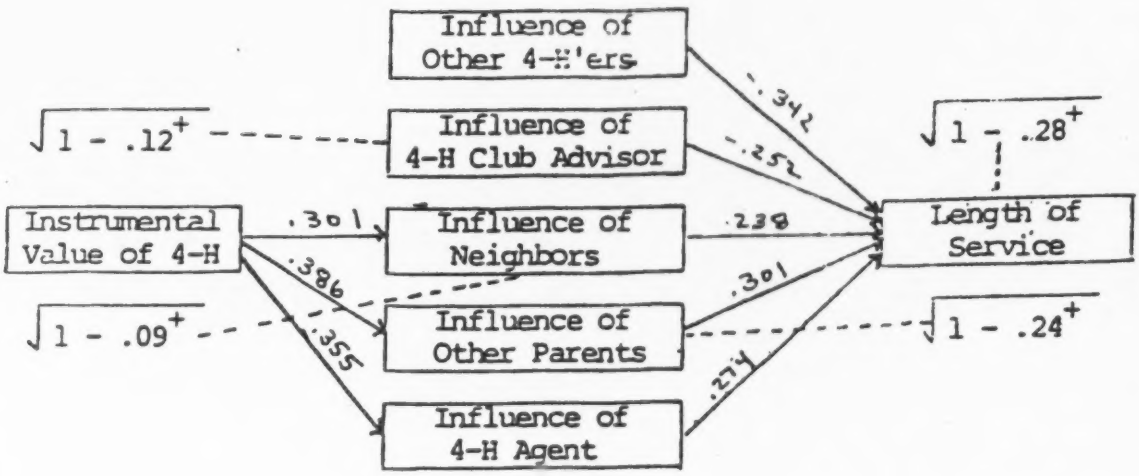


Figure 3. Path model containing sifnicant Path coefficients.

Table I presents the summary statistics for the regression model. The step-wise regression analysis revealed that five variables explained approximately 65 percent of the variance in length of service of a 4-H volunteer leader. The variables in order of entrance were: age (34 percent of the variance explained), years as a 4-H member (added about 12 percent), whether children are in 4-H or not (added about 10 percent), attractiveness of 4-H (added about 4 percent), and occupational status of laborers (added about 4 percent). The R-squared value for the five variable model was .654, which means 65 percent of the variance in length of service was explained by the model. The remaining variables were insignificant in the reduction of the unexplained variance.

The regression analysis revealed that the variables age, years as a 4-H member, having children in 4-H, attractiveness of 4-H and the occupational status of laborer directly influenced the dependent variable length of service. Figure 4 represents a revised model whereby various social background and attitudinal factors directly influence length of service. Thus, persons who were not laborers, had children in 4-H, were older, more attracted to 4-H and served more years as a 4-H member, volunteered more years as a leader than did individuals who were laborers, did not have children in 4-H, were younger, less attracted to 4-H and were in 4-H as a youth for a shorter period of time.

Table 1
Summary Statistics for Regression Model:
Regression of Length of Service on Age, Years as a 4-H Member,
Children in 4-H, Attractiveness of 4-H,
and Occupational Status of Laborer

Regression Step	Variable Entering	R^2	Standardized Path Coefficient	F Value (Total Regression)	F Value (Variable Entering)
1	(X_1) Age	.337	(X_1) .580	28.47	28.47
2	(X_2) Years as a 4-H Member	.461	(X_1) .569 (X_2) .352	23.55	12.68
3	(X_3) Children in 4-H	.565	(X_1) .639 (X_2) .358 (X_3) .330	23.40	12.92
4	(X_4) Attractiveness of 4-H	.612	(X_1) .634 (X_2) .404 (X_3) .334 (X_4) .222	20.97	14.62
5	(X_5) Occupational Status of Laborer	.654	(X_1) .655 (X_2) .374 (X_3) .314 (X_4) .250 (X_5) -.210	19.60	6.22

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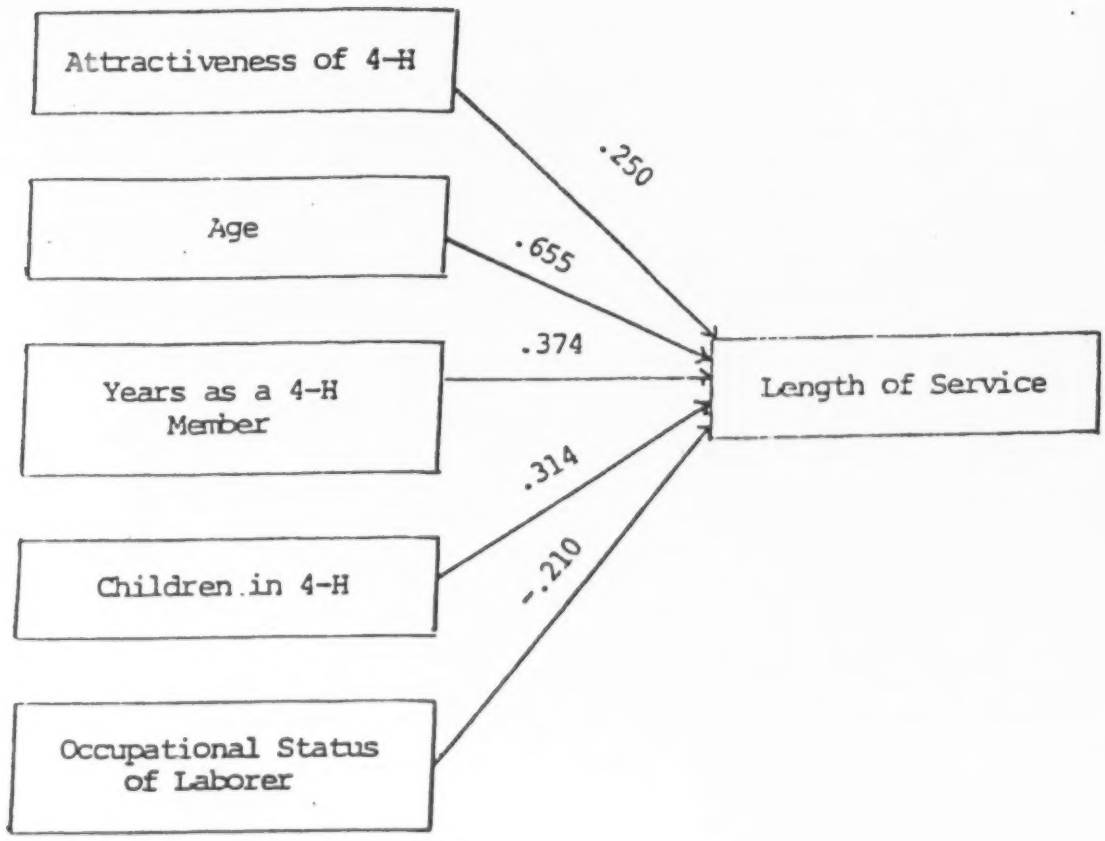

Figure 4 Five Variable Model Containing Significant Path Coefficients

CONCLUSIONS

Several social background factors were associated with continued participation, length of service and level of involvement of 4-H volunteer leaders in this study. Bivariate correlations indicate the social background factors positively associated with continued participation were (1) having children in 4-H and (2) having a spouse as a leader. Previous experience as a 4-H member was negatively associated with continued participation. Age, length of residence in the community, and number of children under the age of 9 years are positively associated with a leader's length of service. Number of children ages 12-14 was negatively associated with length of service suggesting that as a leader's children leave the program the leader discontinues to serve as a 4-H leader. Individuals labeling themselves as homemakers were more likely to contribute more hours of leadership per month at the local level than were leaders in other occupations. The more children a leader had in the 15-19 age range the fewer the hours per year that were devoted to area and state events.

Bivariate correlations indicate that the more flexible leaders were, the more time they would devote to local club meetings and activities. The degree of flexibility was not found to be associated with any other measure of voluntary participation.

Several attitudinal factors were found to be associated with voluntary participation. The more benefits leaders perceive 4-H had to offer them personally (attractiveness of 4-H), the more likely they were to continue as 4-H volunteer leaders. As a leader's perceived instrumental value of the 4-H organization decreased so did their length of service and level of involvement at the area and state levels. A leader's length of service and level of involvement was also associated with the influential role of significant others. As the influence of neighbors and community leaders increased, a leader's length of service increased. Length of service decreased as the influence of 4-H club advisors increased. Level of involvement in terms of hours spent per year at the area and state levels increased as the influence of 4-H agents and other parents increased.

The Sequential Specificity Model of Voluntary Action (Smith 1972) was only partially supported by the findings. Path analysis revealed that only the attitudinal factors had direct or indirect effects on the dependent variable length of service (see Figure 3). A volunteer leader's length of service was directly affected by specific attitudinal factors. A volunteer leader's length of service increased as the influence of neighbors, other parents and the 4-H agent increased. A volunteer leader's length of service was indirectly influenced by the general attitudinal factor instrumental value of 4-H. A leader's length of service increased as the instrumental value of 4-H increased. The remaining hypothesized paths between social background, personality and attitudinal factors were not observed.

Step-wise regression analysis revealed that the social background factors of age, years as a 4-H member, children in 4-H and the occupational status of laborers along with the specific attitudinal factor, attractiveness of 4-H, directly influenced a volunteer leader's length of service. Thus, a leader's length of service increased if he/she were older, participated more years as a 4-H member, had children in 4-H, were not laborers and were more attracted to 4-H.

RECOMMENDATIONS

Further research in 4-H voluntary action should examine additional personality and attitudinal factors which may help to explain why individuals volunteer. Since this study investigated only one personality factor, degree of flexibility, other personality factors may influence an individual's decision to volunteer in 4-H. Researchers should investigate the personality dimensions of social confidence, self image and achievement motivation. Knowledge of the effects of such factors on volunteering can enhance understanding of why adults volunteer as 4-H leaders.

Since no assumptions were made concerning the directionality of relationships between significant other individuals in this study, research is needed to investigate the possible indirect effects these

persons have on a volunteer leader's participation. Knowledge of the influential role of significant other networks may help to establish a volunteer management system and support network for volunteer leaders which may increase level of involvement and length of service.

Previous research in 4-H suggests that individuals who were in 4-H as a youth influences the decision to volunteer. This research is mainly descriptive. Four-H research employing statistical techniques measuring interrelationships, such as, (multiple regression, step-wise regression) will better explain relationships between interrelated variables and can account for the problem of interaction. Additional research is needed to ascertain why previous 4-H'ers are less likely to continue to volunteer their time and talents to the 4-H program. The investigation of such attitudinal factors as a volunteer's general obligation to participate in 4-H, anomia and the efficacy of 4-H to achieve its goals could provide some useful information as to the possible reasons why adults who were former 4-H members are less likely to continue to volunteer as 4-H leaders.

Additional research is also needed to investigate the negative influence of 4-H club advisors on a volunteer leader's length of service. Research efforts should be directed towards investigating various personality dimensions or attitudinal factors which affect the amount of influence 4-H club advisors hadve on a newer leader.

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CREATING AN ORGANIZATIONAL NORM SUPPORTIVE OF BALANCING PROFESSIONAL/PERSONAL LIVES OF PENNSYLVANIA EXTENSION STAFF

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INTRODUCTION

In a study exploring the relationship between Extension work carried out at the county level and Extension agents' family lives, St. Pierre (1984a) investigated how agents felt about their jobs and how they perceived their jobs affected their family lives. The findings--job satisfaction, job conditions, and effects of job on family life--were related to four aspects of work which have been shown to most affect family life. The four aspects of work are:

- absorptiveness of job,
- emotional climate of the job,
- opportunity in the organization, and
- rewards of the job.

More significant differences were found among types of agents than by agents' family life-cycle stages. Effect of the job on family life scales showed agents felt their jobs affected their family lives. In fact, agents perceived their jobs to affect their family lives more negatively than positively (1984b). All aspects of the job that agents reported affecting their family lives negatively were related to the absorptiveness of the job. These were the time the job required, the evening meetings, and the energy required to do the job. Those aspects of the job that agents viewed as positively affecting their family lives were the flexible work schedule, the pride agents' families felt in the work of the agents, and the satisfaction agents derived from working with and helping people.

Cooperative Extension is not unique in the absorptive character of its work and those factors which cause satisfaction and frustration for staff on and off the job (St. Pierre, 1984a). In any work setting, both the employees and employers should recognize the effect work has on

family life and attempt to minimize the negative effects and maximize the positive effects. The organization can directly influence the work environment. Yet, change in one's individual life is a personal responsibility.

PURPOSE AND OBJECTIVES

Kanter (1977) asserts that it is the world of work which should make changes to improve the lives of employees. A necessary corollary to these changes is the creation of an organizational norm supportive of a balanced work and family life. One part of Pennsylvania Extension's comprehensive approach toward creating this norm was its 1984 Extension Staff Conference which focused on Pennsylvania Extension's own personnel.

First, through this conference, Extension intended to communicate that staff members are valued as its most important resource. Second, the intent of the conference was to create an awareness of the interdependence between the worlds of work and family life. Third, during the conference, strategies would be offered to help staff better manage their professional and personal lives. In addition, the conference would give Extension personnel an opportunity to consider future directions the organization might pursue. These objectives follow from the findings of St. Pierre's study (1984a).

In the program, the objective for the Conference read:

> Recognizing that you, the professional, are Extension's most important asset, the goals of the 1984 Extension Conference are:
>
> - to provide information and strategies that will help you more effectively manage your personal/professional life and achieve greater emotional, mental, and physical well-being,
> - to increase your knowledge of program and administrative changes, current University benefits, and existing responsibilities and potential liabilities,
>
> all of which should help you function more effectively in your daily working and living.

The focus of this report will be an assessment of how well the conference goal addressing professional and personal/family life was met.

PROCEDURES

This educational effort was designed to bring about individual and organizational change. To assess whether this conference goal was met, all participating Extension staff were asked to complete an evaluation (1984). In advance, the Conference Planning Committee determined the

necessary level of knowledge, skills, and/or strategies to be attained for the conference to meet its objectives. In addition, staff were asked to indicate their interest in other professional development opportunities.

RESULTS

Among the 378 staff who registered for one of the workshops on professional and family/personal life during the conference, 157 or 42% returned the evaluation questionnaire. Although a mix of field-based staff responded, responses by those on campus are limited to a small number of specialists, see Table I. Campus-based faculty are underrepresented in the evaluation.

TABLE I
STAFF RESPONDING TO EVALUATION
BY POSITION AND/OR ADMINISTRATIVE RESPONSIBILITIES

Field-based *	Respondents	Registered	%
Home Economist	32	67	48
Agricultural Agent	25	64	39
4-H Agent	28	56	50
Regional Agent	16	25	64
County Extension Director	22	58	38
Campus-based			
State Specialists	24	98	24
Regional Assistant Directors	3	6	50
State Program Leader	1	4	25
Other			
No designation	6	-	-
TOTAL	157	378	42

* Duplication of roles has been eliminated.

To address the conference objective on professional/personal life, several educational workshops were offered. One workshop, "Managing Our Personal and Professional Lives," was planned for all conference participants in an auditorium setting. Besides this workshop, each staff member could attend one of four other workshops. Responses to the evaluation indicate a few staff elected to attend only the small group workshops, see Table II. The evaluation response rate from each workshop was similar except for one. The small group workshop, "Working It Out," had a response that was almost double, see Table II.

TABLE II
PERCENT OF STAFF RESPONDING
BASED ON REGISTRATION FOR EACH WORKSHOP

Small Group Workshops	Respondents	Registered	%
Time Management	53	130	41
Life Style Behaviors	25	65	38
Self-Managed Professional	54	128	42
Working It Out	39	53	74
TOTAL	171	376	
Managing Personal/ Professional Lives	141	378	37

In order for the Conference to be considered successful, the Conference Planning Committee expected that 75% of the participants in each workshop would acquire knowledge and find strategies that would help staff more effectively manage their work and personal/family lives and attain greater emotional, mental, and physical well-being.

For the evaluation of the stress and time management workshop, "Up Tight Ain't Right," 83% of the 53 responding indicated that they acquired at least one time or stress management strategy they will use to reduce pressure in their lives; 77% were able to list specific strategies. The most frequently-named strategy was knowing the difference between a problem and a predicament. A predicament was defined as something over which an individual would have no control and about which one should stop worrying. Other stress management strategies listed were stretching, relaxation, and breathing exercises.

Among those evaluating the "Life Style Behaviors and Their Impact on Health: Strategies for Healthier Living--Techniques and Practices" workshop, 80% of 25 respondents said that they acquired at least one strategy or technique to help them live a healthier lifestyle; 68% were able to identify a specific strategy, such as taking time for self twice a day, the value of exercise for good health and stress reduction, and specific exercise and relaxation techniques.

For participants in the workshop, "Becoming a Self-Managed Professional: Strategies for Enhancing Your Work Productivity and Performance," 52% of the 54 responding said they learned at least one strategy which will help them manage their professional lives more effectively; 41% identified strategies, such as observing self, recognizing the value of teamwork, developing goals, concentrating more on success than on failure, and rewarding oneself.

Among participants in the workshop,"Working It Out: Issues People Face in Balancing Work and Family Across the Life-cycle," 64% of 39 respondents said they acquired some knowledge or information which would help them balance their work and personal/family lives; 49% were able to name at least one thing which they had learned. Items learned were:they need to say "No" to some requests on the job; they should determine their values and priorities regarding work and family and, once determined, should continue to remind themselves of those priorities; they learned they should involve other family members in priority setting. Participants said they learned that work stress affects family and vice versa. Some said they became aware that people in all life stages struggle with the issue of balancing work and family--they are not alone.

"Managing Our Personal and Professional Lives," the workshop in which all staff were to have participated, relied on role-playing of Extension professional and/or personal/family situations. Following each vignette, a facilitator led audience discussion. The intent was to help Extension staff gain some understanding of self and his/her personal situation.

Among participants in this workshop, 93% of the 141 evaluating said this session helped them better understand themselves and/or their situations. And 72% said that this session helped them acquire new ways to deal with their work or personal problems. What respondents learned from this session included: it is all right to take responsibility for your own time; say "No" to some demands when appropriate without feeling guilty; the need to find ways to say "No"; eliminate the less important jobs; schedule personal time; the need to work toward balancing work and family life; and to set priorities for work and family with family members. Many participants mentioned they developed more sensitivity to the pressures of co-workers and their personal lives and the importance of getting a problem out into the open and talking about it with co-workers or family members.

Written comments such as: "Really had an effect on me," "(this) made me really assess my own situation regarding my accomplishments and time," and "(it) made me realize what I am doing to myself and my family," demonstrated that this session made people think about issues relating to work and personal life. Many said that those conducting the workshop, Situations Unlimited, were clear in depicting Extension situations and that "this was the best presentation ever at Extension Conference--in 14 years--from the agents' and administrations' perspective." Another said, "The session made me think, but should have concentrated more on solutions."

These findings indicate how much of a challenge life-long learning can be. For three of the five workshops, our expectations as a Conference Planning Committee were met. In two of the five, we did not achieve as much as we hoped, see Table III. Did we, the Planning Committee, expect too much? How well did the Planning Committee communicate clearly its expectations to workshop instructors and to workshop participants regarding what was to be accomplished in each workshop? How well did the workshop instructors carry out their assignments?

TABLE III
1984 EXTENSION STAFF CONFERENCE
COMPARISON OF OBJECTIVES AND FINDINGS

WORKSHOPS	OBJECTIVES	FINDINGS		OBJECTIVES ATTAINED
		LEARNED	SPECIFIED	
OBJECTIVE--STRATEGIES				
Time Management	75%	83%	77%	+ +
Life Style Behaviors	75%	80%	68%	+ -
Self-Managed Professional	75%	52%	41%	- -
OBJECTIVE--KNOWLEDGE				
Working It Out	75%	64%	49%	- -
Managing Personal/ Professional Lives	75%	93%	72%	+ -

What clues do we have regarding why some of the workshops were less successful than we expected? Responses by workshop participants on the open-ended questions of the evaluation provide some clues. For the workshop, "Self-Managed Professional," comments suggest participants had a better understanding of the issues involved than the instructor recognized. Thus, too little time was spent on strategies. In another workshop, "Working It Out," participants expected to gain techniques by which to manage their work and personal lives, even though the workshop was described as a discussion of the issues. Although the workshop, "Managing Our Professional and Personal Lives," was designed to create awareness, some respondents desired more insight into the issues and thus strategies by which to handle professional and family/personal issues. The most negative thing these responses suggest is that staff are interested in more information on these topics.

Another objective of the conference evaluation was designed to determine types of educational programs staff would like to have offered in the future. Among the 157 workshop participants completing evaluation forms, staff identified these topics most frequently:

- Reducing work stress through prioritization and developing a realistic management plan (N=103)
- Effectively managing Extension work schedule (N=102)
- Developing teamwork in the office (N=102)

The next most-wanted programs were:

- Resolving work-related conflicts (N=99)
- Easing pressure through stress and time management (N=98)
- Avoiding job burnout (N=97)

Of the six most-wanted program topics, three are time management-related. The amount of time required in the Extension job was reported by staff interviewed to most negatively affect their family lives (St. Pierre 1984a). The multiple and often conflicting demands of work and family cause stress and frustration, because there is not enough time to do everything. It is clear from these responses that staff seek help in prioritizing activities within their work lives as well as prioritizing activities between their work and family lives. Prioritizing would help staff develop a realistic management plan which should reduce the stress associated with overload and work/family conflict.

Of the 136 conference participants who responded to the question: "Are you interested in participating in the pilot program, "Balancing Professional and Personal/Family Life'?" 56% (N=76) checked "Yes," and 44% (N=60), "No." Among the 56% who said "Yes," 47 indicated they would like to attend with their spouse, 8 said they were married, but would prefer to attend without their spouse, and 13 were not married, but said they would like to participate. Based on this response, planning for this workshop is proceeding. The time that the program is offered will have an effect on attendance, but these numbers confirm staff interest in and perceived need for learning strategies to balance their work and personal/family lives.

CONCLUSIONS

Extension staff were positive toward the 1984 Extension Conference which began the process of helping them manage their professional/personal lives. Not only was an awareness created, but staff gained ideas and strategies for managing their lives to achieve greater emotional, mental, and physical well-being.

Bringing about change in an organization that has existed for three-quarters of a century is slow, sometimes difficult, and, frequently, frustrating. Pennsylvania Extension has recognized a problem, has made the decision to do something, and is in the process of bringing about change. We are challenged to create an organizational norm supportive of a balanced professional and personal life.

Following Staff Conference, an Extension Work/Personal Life Advisory Committee was appointed. At the invitation of the Dean/Director and the Associate Director, two committee members were designated by each of Extension's four professional associations. This Advisory Committee is now planning a workshop for professional staff (and spouse, if appropriate) on the topic, "Balancing Professional and Personal/Family Life." This workshop is planned for a mid-October weekend at a resort in eastern Pennsylvania. This Advisory Committee is expected to address other work/family issues as well.

Other steps remain to be taken. They include:

- Developing an acceptable flextime procedure for the entire organization
- Planning and conducting in-service education programs identified in part through the conference evaluation to focus on the Extension professional's well-being as a total person.

We have just begun.

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IS A VOLUNTEER TEACHER SYSTEM EFFECTIVE?

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INTRODUCTION

The use of volunteer teachers allows organizations such as the Cooperative Extension Service to reach numbers, and sometimes types, of participants that our limited professional staff could never hope to reach. While these volunteers are a valued resource, there is concern about the effectiveness of a volunteer teacher system. This concern is particularly relevant for programs about the more complex areas of resource management.

In Indiana's volunteer teaching system, an extension specialist creates resources on a consumer/management topic and trains extension agents to teach the materials. In turn, the agents teach this topic in special-interest programs and leader training programs. The club leaders then take the materials and topic to a local club and teach.

PURPOSE AND OBJECTIVES

The questions addressed by the present research are vital. Overall, is our program effective? Do we motivate participants to make decisions and take action? And, does the volunteer teaching system "work"? Does the lesson that is taught by a club leader in a club lesson pack enough punch to motivate club members towards decision-making and action? How different is the impact of a club lesson on participants compared with the impact of a program taught by the specialist or agent? How accurate is the assessment when I, as a specialist, fill out that annual NARS report and attribute impact to club participants based upon impact measured at the leader training or special interest level?

PROCEDURES

The data were collected by Home Economics extension agents during the 1982-83 and 1983-84 programming years. Questionnaires were mailed to a random sample of participants in estate planning programs throughout the state. The questionnaires were mailed approximately two months after participants attended the program.

Questionnaires were coded to identify participants by the type of teacher: professional or volunteer. A total of 294 questionnaires were returned, with a response rate of 70 percent.

The Large-Sample Test Comparing Two Binominal Proportions was used to test for differences in population fractions[1]. The null hypothesis, that $P_1=P_2$, was rejected if the Z score was $\pm$ 1.96 or greater.

RESULTS

Total Sample

Of the total sample (n=294), 66 percent had a will at the time they attended the program. Of these, 75 percent had either made the will or last updated the will before 1981; only 25 percent reported having a recent will (made or revised 1981 or later).

Table 1 summarizes the reported actions taken, as a result of information learned in the estate planning program, by those with a will and those without a will at the time of participation.

Most participants (90%) without a will discussed estate planning with their family; 11 percent had contacted an attorney within two months following the program. Another 84 percent expressed an intent to contact an attorney in the near future. Fifty-two percent of those with a will reviewed their will; 33 percent had contacted an attorney. Another 34 percent said they intended to contact an attorney. Most participants also had reviewed how title was held to property in their family: 58 percent of those with a will and 65 percent of those without a will.

Other people took action as a result of information transfer. More than 20 percent of both groups reported that other family members took action toward estate planning as a result of information shared from the program.

[1] Mendenhall, W; Ott, L. and Larson, R., STATISTICS: A TOOL FOR THE SOCIAL SCIENCES, Duxbury Press, North Scetuate, Mass, 1974.

TABLE 1. ACTIONS TAKEN BY WILL STATUS

Actions Taken	With Will*	Without Will*
Reviewed will	52%	—
Discussed estate planning	—	90%
Identified need for a will	—	87
Contacted attorney	33	11
Made changes in will	9	—
Intend to contact attorney	34	84
Reviewed title to property	58	65
Made change in title	7	5
Other family members took action	22	24
	n=193	n=101

*Multiple responses were allowed so columns will not sum to 100%.

It was expected that estate planning information might have greater impact on those whose wills were less recent than on those who had either written or revised their will within the last several years. To test this hypothesis, responses of participants who had wills drawn before and after 1981 were compared (Table 2). There was no significant difference in the actions taken by the two groups except for their intent to see an attorney. Those with post-1980 wills were far less likely to report an intention to see an attorney. They were not, however, less likely to have already contacted an attorney or less likely to have made changes in their will.

TABLE 2. ACTIONS TAKEN BY WILL TENURE

Actions taken	Before 1981	Post 1980	Z Score
Reviewed will	57% (82)	37% (18)	1.303
Contacted attorney	32 (46)	35 (17)	-.18
Changed will	8 (11)	14 (7)	-.74
Intend to see attorney[1]	40 (53/131)	12 (6/43)	3.29*
Reviewed title to property	63 (91)	43 (21)	1.32
Made change in title	4 (6)	14 (7)	-1.29
Other family members took action	22 (32)	20 (10)	.140
	n=144	n=49	

*$p \leq .05$
[1]n varies because question not applicable for total sample.

Comparison by Teacher Type

Thirty-six percent (n=107) of the respondents had attended a program taught by a professional teacher; 64 percent (n=187) had attended a club lesson that was taught by a volunteer teacher. The will status and tenure differed between the two groups. Forty-three percent of those attending a program taught by a professional teacher did not have a will; only 29 percent of those attending a club lesson taught by a volunteer teacher did not have a will (p .05) Participants of club lessons also were more likely (p .05) to have a recent will than those who attended a program taught by a professional teacher. Because of these differences, comparisons between those taught by professional and volunteer teachers were made controlling on will status and will tenure.

Will Status: No significant difference was found in the without-a-will group by teacher type on all seven measures of actions (Table 3). Two actions were strongly related, however. Those taught by a professional teacher were more likely to express an intention to contact an attorney (87%) in the near future and were more likely to have reviewed title to property (74%) than those taught by a volunteer teacher (76%, 58%).

TABLE 3. ACTIONS TAKEN BY TEACHER TYPE, WITHOUT A WILL

Actions taken	Professional Teacher	Volunteer Teacher	Z Score
Discussed estate planning	93% (43)	87% (48)	1.040
Identified need for a will	89 (41)	85 (47)	.550
Contacted attorney	13 (6)	9 (5)	.635
Intend to contact attorney[1]	87	76	1.7
Reviewed title to property	74 (34)	58 (32)	1.653
Made change in title	4 (2)	5 (3)	.261
Other family members took action	28(13)	20 (11)	.975
	n=46	n=55	

[1]n varies because question not applicable for total sample.

Will Tenure: A comparison was made of those who had a will by teacher type, controlling for tenure of will. For those with pre-1981 wills, there was not a significant difference in 6 out of 7 actions measured (Table 4). The one action measured that was different was having contacted an attorney. Those participants taught by volunteer teachers were significantly more likely to have contacted an attorney than those taught by a professional teacher. Although not statistically significant,

fewer participants taught by volunteer teachers reviewed title to property than those taught by a professional teacher (73% vs. 58%). A comparison of the post-1980 will group showed no significant difference by teacher type (Table 5).

TABLE 4. ACTIONS TAKEN BY TEACHER TYPE FOR WILL TENURE BEFORE 1981

Actions taken	Professional Teacher	Volunteer Teacher	Z Score
Reviewed will	57% (29)	57% (53)	—
Contacted attorney	20 (10)	39 (36)	-2.36*
Changed will	8 (4)	8 (7)	.067
Intend to see attorney[1]	43 (20/47)	39 (33/84)	.365
Reviewed title to property	73 (37)	58 (54)	1.725
Made change in title	2 (1)	5 (5)	.895
Other family members took action	27 (14)	19 (10)	1.118
	n=51	n=93	

*$p \leq .05$

[1]n varies because question not applicable for total sample.

TABLE 5. ACTIONS TAKEN BY TEACHER TYPE FOR WILL TENURE POST-1980*

Actions taken	Professional Teacher	Volunteer Teacher	Z Score
Reviewed will	n=4	n=14	.240
Contacted attorney	n=3	n=14	-.350
Changed will	n=2	n=5	.578
Intend to see attorney[1]	n=0/7	n=6/35	-1.18
Reviewed title to property	n=2	n=19	-1.636
Made change in title	n=3	n=4	1.595
Other family members took action	n=2	n=8	-.036
	n=10	n=39	

*percentages not given because of low n.

[1]n varies because question not applicable for total sample.

CONCLUSIONS

A random sample (n=294) of participants in estate planning programs was evaluated two months after attending the program. Questionnaires were coded to identify participants by type of teacher: professional or volunteer.

Overall, the estate planning program was very successful in motivating participants to take action. Those with a will reviewed the will (52%). Those without a will discussed estate planning with their family (90%). One-third of those with a will had already seen an attorney in the two months following the program and an additional 34 percent expressed an intent to contact an attorney shortly. Eleven percent of the non-will participants contacted an attorney, and another 84 percent intended to contact an attorney. Most respondents had reviewed title to property and more than 20 percent said family members had taken action as a result of information shared from the program.

Comparing participants with pre-1981 wills to those with post-1980 wills, actions taken did not vary significantly except for intentions to see an attorney. Those with recent wills were less likely to express such intent, yet they did not differ in probability of having contacted an attorney or having made changes in their will. The reason for this difference is not explained by the data. It may be that those who wanted changes had done so promptly. Because they had seen an attorney recently, this group may have needed less search time for an attorney, and for important papers. And, the changes they made may have been fairly simple ones that were easily implemented.

Participants attending a club lesson were significantly more likely to have a will than participants attending programs taught by professional teachers. Club lesson participants who had wills were also more likely to have recent (post-1980) wills than general program participants. These differences were controlled for when comparing actions taken by the two teacher types.

For those with a will made or updated before 1981, the only significant difference by teacher type was on having contacted an attorney. Those taught by a volunteer teacher were more likely to have contacted an attorney than those taught by a professional teacher. It is possible that questions are raised in club lessons that cannot be answered, motivating participants to seek professional counsel. Or it may be that a club lesson offers an opportunity for informal sharing of estate planning experiences and information that serve as motivators.

A comparison of the effect of teacher type on respondents without a will and a comparison of those with post-1980 wills showed no significant difference on any of the seven actions measured. A majority of those without a will had discussed estate planning, identified the need for a will, and reviewed how title was held

to property in their family.

Overall, the findings indicate that estate planning programs are effective. Moreover, the findings indicate that volunteer teachers can be just as effective in motivating people to take action in estate planning as can professional teachers.

A Critique of the Following Papers:

A CAUSAL MODEL OF PERSONAL FACTORS
INFLUENCING PARTICIPATION IN
4-H AMONG ADULT VOLUNTEER LEADERS

Frederick R. Rohs

IS A VOLUNTEER TEACHER SYSTEM EFFECTIVE?

Dixie Porter Johnson

CREATING AN ORGANIZATIONAL NORM
SUPPORTIVE OF BALANCING PROFESSIONAL/PERSONAL
LIFE OF PENNSYLVANIA EXTENSION STAFF

Robert B. Lewis
Joan S. Thomson
Tena L. St. Pierre
Nancy-Ellen Kiernan

DISCUSSANT:

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Ohio State University
May 22, 1985

VOLUNTEERISM

Volunteerism is the focus of two of the papers under discussion today. The phenomenon of the adult volunteer in the United States is thoroughly interwoven in the democratic fabric of this country. Authors Prawl, Medlin and Gross, (1984) raise the haunting question, "What would happen if all volunteer leaders in the United States would go on strike?" (p. 82). The stability of our entire social system would likely be jeopardized.

It has always been a great curiosity of mine to consider whether the pioneers who formed and initiated the Cooperative Extension Service could possibly have foreseen the magnitude of the impact of volunteers on the delivery of Cooperative Extension programs. Did they envision the one and one half million adults who without financial compensation today make the Extension system work? As inclined as I am to attribute saintly qualities to the framers of the Smith-Lever Act, reality suggests that perhaps the volunteer phenomenon is a serendipity resulting from the happy interaction of strongly held personal values with enormous developmental needs.

Let us consider the paper dealing with the retention of 4-H volunteer leaders. The author says, "The purpose of the study is to investigate the relationship between social background, personality and attitudinal factors and the participation of adult volunteers in the 4-H program in Ohio." He should be commended for the forthright clarity of the statement of purpose. My practical nature leaps ahead to possible applications of the findings which have the potential for contributing substantially to the management of volunteer systems in 4-H, if not beyond. However, my cautious nature tells me to slow down, examine the methodology, the definition of terms, the data gathering, the statistical analysis and all the other "good and proper procedures" one expects from a solid research paper.

Let me confess that this paper was the first of the three which I read. I was fascinated with the first few words of the title, "A Causal Model of Personal Factors..." When I see the word "cause" in a research title dealing with human behavior, my curiosity is immediately aroused. My anticipation is for a dynamic breakthrough as a result of scientific experimental research effort. My viewpoint was undoubtedly strongly influenced by a long suffering professor of research methodology who in Pavlovian fashion conditioned my reflexes and sensitized me forever to the serious implications of suggesting causal relationships of variables. Referring to the causal/comparative descriptive research method, Merriam and Simpson (1984) suggest one should "not assume independent variables either do or do not cause outcomes reflected in the dependent variable" (p. 58). The

author of the paper under discussion is certainly appropriately restrained by simply suggesting possible relationships of variables and not claiming causal relationships.

The author also deserves commendation for the schematic diagram in Figure I which displays the Sequential Specificity Model of Voluntary Action. This illustration added substantially to the clarity of the presentation. For one afflicated with advancing age, I need all the help I can get to understand the complexities involved in a research project. My bias says extreme verbage too often hides good ideas.

In regard to methodology, more detail about the sampling procedure would have been helpful to explain for instance how the 300 in the sample were obtained. However, the 72 percent questionnaire return rate seemed very respectable to me. One point of confusion resulted for me when I discovered in the conclusion that variables were mentioned that had not been previously supported with data. To illustrate, conclusions were made about the length or residence, the spouse as a leader, the number of children under 9 and between 12-14, individuals labeled as homemakers, etc. Perhaps this was done to insure brevity. Regardless, it was a distraction....like being fed the frosting without any cake. Another question which kept bugging me was, "What the heck is a 4-H club advisor?" I could not find a definition anywhere! All we are told is that leader tenure decreases as 4-H club advisor influence increases. Do we conclude that we need less influential advisors or maybe fewer advisors are needed?

In terms of the results, the regression model explained 65% of the variance in the length of service of a 4-H volunteer leader. It is important to note the author°s conclusion that, "A leader's length of service increased if he/she were older, participated more years as a 4-H member, had children in 4-H, were not laborers and were more attracted to 4-H."

The recommendations call for the inevitable need for additional research. Some knowledge always seems to whet the appetite for more. The author made one recommendation which I find most intriguing. He says, "Knowledge of the influential role of significant other networks may help to establish a volunteer management system and support network for volunteer leaders which may increase the level of involvement and the length of service." To me, this suggests a most fruitful and promising line of future inquiry.

VOLUNTEERS AS TEACHERS

The second paper of this series also deals with the topic of volunteerism. Specifically it asks the question, "Is a Volunteer Teacher System Effective?"

Before broaching this paper, allow me to indulge in a bit of reminiscing about a related topic. Sometime ago I recall reading about the development of the educational system in England (Good, 1960). In response to a lack of fiscal support by the public for schools, a man by the name of Joseph Lancaster fashioned a scheme to compensate for an adequate number of competent teachers. A simple idea was launched. Brighter and older pupils were taught a daily lesson each of whom then relayed that lesson to a small group of other students. The "monitorial" system was flaunted as a cheap and easy way to teach reading, writing, and arithmetic to the poor during early 19th century England.

The similarity of method makes it clear why the volunteer teacher system described in this paper would trigger my recall of the English monitor system. Imagine my shock when an educational history professor made the assertion that this system set back public support of education by at least 100 years because it soothed the public's conscience since some 50 to 60 percent of working class children received at least a modicum of education!

Does this suggest volunteer teachers ought not be used? Not to me it doesn't. Indeed, I think it underscores the value of a research study like the one under consideration which provides evidence of volunteer teacher effectiveness. If I might editorialize further, I feel that knowledge of content alone is not an adequate basis to reflect teacher expertise. One of the many challenges of researchers in this area is to sort out the variables which are associated with effective teaching by volunteers.

Moving on to the research paper at hand, the author raises important questions about volunteer teaching effectiveness in response to extending the scarce resources represented by the professional staff. She describes the familiar traditional multiplier effect of the university specialist who teaches the Extension agents who in turn teach the local leaders who finally reteach the subject to local groups.

This research effort deserves commendation because it seeks to find answers to questions about the results of teaching -- the action that may be associated with the learning experience. This study deals with aspects of what Claude Bennett (1977) calls the "Practice Change" level in the hierarchy of program evaluation. Conclusions about program impacts are more convincing when drawn at that level of evidence than mere attendance or reaction on a so called "happiness scale" of participation.

The brevity of the description of methods leaves the reader with questions about the research techniques employed. One wonders how the groups were selected to be taught by professionals as opposed to those to be taught by volunteers

Also, I would surely like to know more about the personal characteristics of both teaching groups, their educational experience, time in community, etc.

Regardless of such questions, a questionnaire return rate of 70% seems quite respectable. Overall, the author concludes that the program was indeed effective in motivating action. It was interesting that 2/3 of the participants in the estate planning program already had wills before participating in the program. Also, those with wills drawn within the last several years, were signficially more likely to see an attorney than those more recently drawn.

The finding at the heart of the research was that no significant differences were found between professional versus volunteer teachers among seven measured actions by participants who had not made a will. When participants with wills drawn before 1981 were taught by a volunteer they were more likely to contact an attorney. One wonders if the volunteers taught in their home community groups and if the professionals taught the general public meetings? If so, could the above difference be due to variables other than knowledge, skills and abilities of teachers or perhaps to other characteristics related to trust level and tenure in the community?

In sum, the finding that "--- volunteer teachers can be just as effective in motivating people to take action in estate planning as can professional teachers" is certainly very important. However, one must be cautious in generalizing these findings to all volunteer teachers under all circumstances. There could potentially be a number of intervening variables which might limit the application of these results in both national and international settings.

Overall, the paper was quite thought provoking and well written. One final suggestion, I really missed not having a bibliography!

JOB AND FAMILY LIFE

The third and last paper I will comment on redirects the focus of our attention from volunteers to one of organizational/ management consideration. Up-front let me reveal my personal bias about the importance of this study. This effort appears to reflect a fundamental commitment by the Pennsylvania Extension Service to a humaness of administrative management and staff development that is truly exciting. When organizations become concerned to this extent for the welfare of their employees, whatever the motivation, it seems a cause for celebration.

This paper builds upon the earlier work of St. Pierre (1984) which concludes that Extension agents perceived their jobs to

affect their family lives more negatively than positively. The authors call for an organizational norm which supports a balance of work and family life. To this end, the 1984 Pennsylvania Extension Staff Conference was dedicated. This study addresses the effectiveness of the conference in meeting a balance of professional and personal/ family life goals.

Permit me a brief digression at this point. I am struck with the immense complexity of dealing with such a simple sounding idea as balancing professional and personal/family life goals. On reflection, the cultural/social/psychological factors involved are mind boggling. I am reminded of a colleague of mine at MSU, Dr. Donald Meaders, (1985) who recently served as a reactor to several research papers at a symposium similar to this one. He cited the parable of the six blind men discovering an elephant part by part, each describing an unrelated portion of the entire animal. You will recall the explanation of each as the tail, or trunk or whatever part of the animal was touched. My point is, as researchers we may be describing individual parts with great clarity without regard to the interconnections of the larger picture. Hopefully a theoretical basis for such studies will guide us and provide overall direction for exploration of the individual parts and an explanation of their relationships.

Returning to the paper at hand, based upon the extremely brief description of procedure, I assume that conference participants were asked to complete an evaluation questionnaire at the conclusion of the conference at which each participant attend two sections. It is not clear whether the questionnaire was mailed or completed immediately. While the evaluation effort is commendable, one should keep in mind where Bennett (1977) places participant reaction in the hierarchy of evaluation impact. It would be highly desirable to know the "Practice Change" or "End Results" as an indication of program impact. It is unknown how staff might have reacted after an extended time following the conference and what strategies might actually have been implemented as opposed to those proposed.

I am sure the researchers were disappointed in the overall 42% return of the questionnaire. The haunting question remains: "How would the other 58% answer these questions?" Even among the field staff, in only one category (regional agents) did more than half of those eligible respond. Only about one fourth of the specialists and the program leaders responded. This makes it difficult to draw valid conclusions from the results. One question begs attention. "Why would such a seemingly noble effort be met with such resounding indifference?"

The reported findings indicate that with only four of ten questions did the responses meet or exceed the predetermined objectives set by the planning committee. I suppose one could become disillusioned by these results and thereby give up

pursuing the matter any further. I truly hope that is not the case.

One possible key to future strategies resides in the content requested by the respondents in future programs. Perhaps expanded communications among participants, resource persons and administrators in planning future staff development opportunities will result in the creation of the desired organizational norm which supports a balance of professional and personal life. By all means, Godspeed in such laudable efforts.

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